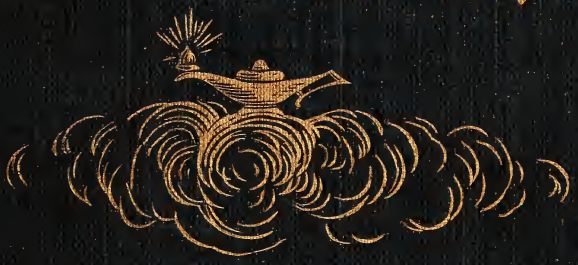
A New Life in Education



$600 Prize Book

[Green Fund Book, No. 9 a.]

A NEW LIFE

IN

EDUCATION.

By FLETCHER DURELL, Ph. D. (Princeton.)
Professor in Dickinson College.

A PRIZE BOOK.

PHILADELPHIA:
THE AMERICAN SUNDAY-SCHOOL UNION,
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THE JOHN C. GREEN FUND BOOKS.

THIS volume has been prepared and is issued under the provisions of the John C. Green Income Fund. The Fund was founded in 1877, with the cordial concurrence of Mrs. Green, by Robert Lenox Kennedy, on behalf of the residuary legatees of John C. Green. Among other things, it is provided by the deeds of gift and of trust that one-sixth of the net interest and income of this Fund shall be set aside; and whenever the same shall amount to one thousand dollars the Board of Officers and Managers of the American Sunday-School Union shall apply the income "for the purpose of aiding them in securing a Sunday-school literature of the highest order of merit." This may be done "either by procuring works upon a given subject germane to the objects of the Society, to be written or compiled by authors of established reputation and known ability, . . . or by offering premiums for manuscripts suitable for publication by said Union, in accordance with the purposes and objects of its institution, . . . in such form and manner as the Board of Officers and Managers may determine."

The premium plan is to be followed at least once out of every three times.

It is further required that the manuscripts procured under this Fund shall become the exclusive property of the American Sunday-School Union, with no charge for copyright to purchasers of the book, it being the intention of the Trust to reduce the selling price of works issued under the provisions of the Fund.

PUBLISHER'S PREFACE.

THIS work received the first prize of SIX HUNDRED DOLLARS offered by The American Sunday-School Union, under the provisions of the John C. Green Income Fund. The Society in March 1892 made the offer of one thousand dollars in prizes on the following terms:

ONE THOUSAND DOLLARS IN PRIZES.

The American Sunday-School Union offers *One Thousand Dollars* in two premiums: $600 for the best book, and $400 for the next best book written for the Society, on

The Christian Nurture and Education of Youth for the Twentieth Century.

Each writer will be expected to suggest an appropriate title to his work; and will be allowed the widest practicable freedom in the form and style of treatment: *e. g.* didactic, descriptive, narrative, or a tale illustrating the principles and methods of education and upbringing. The Society seeks practical and useful works. The books should be free, however, from the prejudice and bias of current controversies.

The works must be popular in character of a "high order of merit," and each consist of not less than 50,000 nor more than 100,000 words.

The MSS. must be submitted to the Committee of Publication on or before October 1, 1893. Each MS. should have a special mark, and the name and address of the author should be sent at the same time in a sealed envelope (not to be opened until after the award) bearing the same mark, and both addressed, post or express prepaid, to The American Sunday-School Union, 1122 Chestnut Street, Philadelphia, Pa.

The two MSS. gaining the prizes are to become the exclusive property of the Union, and the prizes will be paid when the copyrights of the same are secured by the Society.

The Society reserves the right to decline any and all MSS. offered, if unsuitable for its purpose.

Unaccepted MSS. will be returned to the writers at their expense.

These prizes are offered in accordance with the terms and conditions of the John C. Green Fund.

THE AMERICAN SUNDAY-SCHOOL UNION,
1122 CHESTNUT STREET.

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AWARDS OF PREMIUMS.

THE AMERICAN SUNDAY-SCHOOL UNION, in March, 1892, offered two premiums; one of $600 for the best book, and one of $400 for the next best book, written for the Society, on "THE CHRISTIAN NURTURE AND EDUCATION OF YOUTH FOR THE TWENTIETH CENTURY." These MSS. were to be submitted to the Society on or before October 1, 1893. At the November meeting of the Board, the Committee reported the results of its examination of the MSS. The premium of $600 was awarded to the MS. entitled, "A New Life in Education, by I. L. L. J." The second premium of $400 was awarded to the MS. entitled, "How John and I Brought Up the Child, by John's Wife." Upon opening the sealed envelopes, after the awards were made, it was found that the first work was written by "F. Durell, of Carlisle, Pa.," and the second by "Mrs. Elizabeth Grinnell, of Pasadena, California."

PREFACE.

This book is written with a double purpose, to discuss, first, the place of the religious (as including the moral) element in education; and, second, the place and function of the highest type of education, in the immediate future. It will be found, however, that in the treatment these purposes merge or coalesce into one. Beyond this, the views herein expressed sufficiently explain themselves. It may be of interest to some to know that these views are the outgrowth of the study and teaching of subjects mainly scientific in character.

The sources of the material used being familiar and easily accessible to the reading public, and it being the intention to have the book as far as possible a pictorial argument, I have not deemed it advisable to cumber the pages with detailed references or footnotes. The main sources of information, and notes on matters needing further explanation, are given in an appendix. Special mention however, should be made of my debt to the ex-

tremely useful Reports of the Commissioner of Education.

I wish also to make acknowledgement of the aid, direct and indirect, in the preparation of this book, given me by my former colleague, Prof. Robert W. Rogers, now Professor of Hebrew and Old Testament Exegesis in Drew Theological Seminary. My best thanks are due to my present colleague, Prof. Bradford O. McIntire, for aid in reading the proof and for rhetorical corrections and other changes. The editor of The American Sunday-School Union, has also made several important suggestions, which I have been glad to adopt.

FLETCHER DURELL.

CARLISLE, PA., *March 19, 1894.*

N. B. The Index figures in the text of the work, refer to notes in the Appendix, at the end of the volume.

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A NEW LIFE IN EDUCATION.

CHAPTER I.

A HERITAGE AND A NEED.

A CONTRAST.

AS the world advances the function of the teacher becomes more and more important. Among uncivilized peoples there are no specific, organized educating agencies. All education is incidental to and a part of other pursuits and pleasures. But, in proportion as the world advances, professional teachers appear in all lines and areas of work and pleasure. Take the contrast, in this respect, between the land in which we live as it was four hundred years ago and as it is now. Then there was not a single trained teacher amid all the populations of this vast country, now there are three hundred thousand of them; then there was not a single school child, now there are fifteen millions; then not a single wigwam devoted to the purposes of instruction, now two hundred thousand buildings devoted to the work of the most intense, exclusive education, some of them palaces in splendor and beauty; then not a single string of wam-

pum expended for purposes of either abstract or directly practical instruction, now $150,000,000 of the public money is so expended, which sum is supplemented by an increasing and rising tide of private benefaction.

I. INCREASE OF FORMAL EDUCATION.

This fact of the increasing function of the teacher is realized in a somewhat different way, if we consider the increasing number of occupations—the preparation for which is handed over more or less to the instructor. The first teachers gave instruction in only here and there a subject or a calling, which for the time being was regarded as particularly important. Not many centuries ago only two occupations had distinct, adapted, preliminary training—war and the priesthood. "The education of the middle ages was either that of the cloister or the castle. . . . . The object of the one was to form the young monk, of the other the young knight." Since then not only have the military academy and the theological seminary been developed, but also schools adapted to prepare one for almost any form of work or pleasure.

As the world has advanced, more phases and elements of life have been made departments of distinct training. In each an abstract essence of principles has been wrought out. This is early trained into the mind, and is later used everywhere in its appropriate area of work, and is built up and around with details and developed into new forms

as occasion may require. Men, who formerly would have scratched in the earth with rude shovels in search of ore, without a thought of previous schooling for the occupation, are now trained into mining engineers. Men, who once could have measured a piece of land only as they had seen their fathers do it, by ploughing it with oxen and counting the days occupied, are now trained as civil engineers. Schools for journalism, business, cookery, sewing, dress-making, millinery, replace the incidental and desultory instruction of former days given by the editor to his assistant, by the business man to his clerk, by the mother to her daughter. Carpenters are coming to be trained, not as apprentices, but in manual training schools. Politics is taught in universities. Agriculture in which formerly there was only such instruction as the farmer gave his sons and hired men, has now become the field of labor of a host of different kinds of teachers, men that teach chemistry and botany and surveying, and the combination of these and other sciences, as agriculture itself. Art and bicycle-riding alike, and all forms of esthetics and amusement are taught. Even the play of children has been handed over to the teacher in the kindergarten to be made more fruitful. Even teaching itself has been made the subject of instruction, and men are taught how to teach.

II. INCREASE OF INFORMAL EDUCATION.

Thus various kinds and portions of what was

once incidentally and accidentally conveyed information have been converted into departments of specific, professional education. But not only has the amount of professional teaching thus increased, the amount of lay or incidental teaching has wonderfully increased also. The extension of professional teaching has not diminished, it has rather enlarged the amount of lay teaching. Taking education in its broadest sense, every man, as has often been remarked, is educated by all whom he meets, by all of his surroundings, and by many of them profoundly. Their primary and conscious or intended purpose is usually something else, and yet many of them are so intensely educative as to form almost specific educators. Travel has cheapened till it is to some extent within the reach of all.

Photographs and various pictorial illustrations are so numerous, and fiction depicting the habits and life of other lands is so abundant and excellent and costs so little, that all can supplement travel or indeed multiply it by their use. Newspapers are manifold teachers. All these are powerful educators, and the increase in their number and excellence has been prodigious. Every advertiser is an educator. Every man with a new idea or invention, in order to reap the fruits of it or make it fruitful in the lives of others, must instruct the public. Every political campaign is a factor in national education. The preacher educates his congregation, the lawyer his client and jury, the business man his employees and patronizing public,

and in the rush of modern life each of these is doing his work with greater care and intensity. Indeed, to-day, almost every man to succeed must carefully educate a clientage. In all lines men have been compelled to convert themselves more and more into teachers. Man's success depends increasingly on his ability to teach in all sorts of ways, and to be taught in like manner.

III. LIFELONG EDUCATION.

Not only is it found that a specific education, a period of training pure and simple, is more and more necessary in every department of life and work, but it is also being realized that there is increasing need that this education be continued throughout life. In an ever greater number of departments, a single period of training at the outset is found to be insufficient. Men must be constantly learning new methods. The world makes fossils ever more rapidly. Once this process occupied thousands of years. Now ten years is sufficient for it. The physician to do his work in the best way, must not only learn as best he can constantly, but more and more he must also occasionally, if possible, give up a year's practice and devote the time exclusively to study in some institution. The clergyman often does likewise.

The teacher devotes some vacations to study in some school; in many colleges each professor is sent off at stated intervals for a year's study in some advanced institution at home or abroad to mas-

ter the newest methods in his specialty. Just as the manufacturer counts on making some changes constantly, and also, at stated periods, on removing bodily large sections of his machinery and sending them to the junk shop and replacing them by more powerful and improved machinery, so must every first-class worker both constantly and periodically renew himself. He must learn and relearn new information. He must train and retrain himself in new methods. He must be constantly and repeatedly educated.

VISTAS OF NEED.

Thus the advance of the world life has been marked by an advancing and developing system of education. Nor has the limit of usefulness of this agency yet been reached. Education having extended itself throughout the main elements of life and the entire duration of life, needs further to extend itself in detail and among all peoples, and also to complete and perfect all its present numerous functions. But most of all it needs to be elevated in function to the highest point, that is intensified and idealized in every possible way. There is an increasing demand for the utmost use of its highest offices and for the development in it of new and more elevated, more spiritual functions, if possible. Its powers have been extended in the past, they now need to be exalted to the highest pitch. If we examine some features of that heritage, which the twentieth century is about to

receive from the nineteenth, this overwhelming need for the utmost exercise and development of the higher and more spiritual functions of education will everywhere appear.

A CONCRETE BASIS.

The nineteenth century will hand down to the twentieth a material civilization which has suddenly outrun all other factors and elements in the developing world life. Material progress has been so swift, and men are so immersed in the vast processes of further concrete development, that they do not often pause to contemplate properly how much has already been accomplished. Furthermore, the results already attained are so unevenly distributed and often so imperfectly applied, that when men do pause to examine they do not rightly estimate them. Rightly estimated, it is no exaggeration to say that the problem of a *material* basis for a new and better world has, in many respects, been solved. A sufficient material basis, in fact or in method, has been laid for that Utopia, that Millenium, that Kingdom of God, of which men have dreamed in all ages.

I. COMMUNICATION.

In the first place, the problem of communication, of the conveyance swiftly, universally, and at small cost among men, of knowledge, thought and sympathy, has been solved. The telegraph and telephone, the printing-press and post-office already

answer every practical purpose. All important facts and sympathies, the death of a president, the emancipation of a race, the discovery of a new principle, may at once be made known throughout the world at little expense and trouble, and men can act upon them unitedly and harmoniously if they desire so to act.

As Joseph Cook says, when cable lines now in process of construction are finished, it will be possible to send a message round the world seven times in an hour. It is possible now to communicate with three-fourths of the missionaries in the world, from any large city, within a day. Other inventions may give new facilities of communication to supplement those we now have. The telautograph may enable one to write a message on the other side of the globe. What seems at present the wild dream of being able by use of electricity to see what is happening at the end of a line on another continent may be realized in the future. But without another invention of this kind, without a single new facility of communication beyond those which we already possess, methods for the mechanical exchange of fact, thought and sympathy, adequate to the harmonious development and reciprocal enrichment of all lives, have been wrought out.

II. TRANSPORTATION.

The problem of transportation has also been sufficiently solved by the railroad and steamship in

their various types. By these, wheat is carried from both Dakota and India to London without adding an undue percentage to its cost, and is thus made to feed advantageously the millions of a metropolis on the other side of the globe. The luscious, but perishable fruits of California are transported in like manner. Aye, the dressed fresh meats of Australia are now being carried to London in increasing quantities, so that the present system of transportation enables one part of the world to profitably feed on the perishable products of its antipodes. What is true of the food necessities of life is true also for some of its delicate, esthetic luxuries. The orange blossoms of Florida are sent and carry their perfume over a large part of the United States. Cut flowers packed in New York are delivered in unimpaired freshness in Paris.

New facilities of transportation may come. Some form of electrical propulsion, substituting the purely rotary motion of the motor for the reciprocating action of piston and rod, may double the speed of our trains. Competent authorities assert that with proper road-bed and equipment there is no reason why a train driven by electricity should not move with a speed of one hundred and fifty or two hundred miles an hour. Aerial navigation may even surpass this both in speed and economy. But as the matter stands at present, so far as exchanging readily the best products of any one land with the best from all the rest

of the world is concerned, without adding materially to their cost, all that is necessary has already been achieved, and thus another wall has been built in the foundation of a new and better world life.

III. PRODUCTION.

The problem of production has also been adequately solved. In fact over-production is the cry almost everywhere, the curtailment of production has become a prominent feature of modern business life. A small per cent.[1] of the land in our Southern States will produce all the cotton the world can use. A small fraction of the West will produce enough wheat to make bread for the world. The merest extension of the process we now know, the merest duplication of the machinery we now possess, would enable us to feed the world properly without effort, to clothe the world properly, and also to bestow upon all human beings the principal luxuries of life. On the one hand, this has been accomplished by the vast developments of labor-saving machinery, by putting life, thought itself, into iron and wood.

As an illustration of the brain which acts in steel and steam the world over, take the wonderful machine which has been invented for weaving that difficult fiber, horse-hair. The fibers to be woven are short, of unequal length, considerably thicker at one end than the other, very elastic and so hard that they will speedily wear away the hardest steel over which they may be dragged. The machine

has a shuttle with a pair of jaws, and a hand which picks up one hair and only one, and presents it to the jaws of the shuttle. The hand must let go at the very instant the shuttle takes hold, otherwise the hair would be dragged through its fingers, which would soon be worn away. Sometimes however the fingers fail to grasp this single hair. It makes then a second try, and, if the second fail, yet a third. Supposing the third attempt also prove unsuccessful, there being no time for a fourth, the hand promptly stops the weft motion, so that no change takes place, whilst the shuttle is making its traverse without a hair to form the weft. Such a machine may be taken as a miniature representation of all our present vast system of perfected machinery, the world over.

Not only are machines vast labor performers, they serve and aid each other. On one of our great steamships beside the main engines, there are numerous auxiliary engines, which aid and act with the main engines as if they were intelligent, titanic beings. Smaller engines feed coal to the larger, fan the draught, withdraw waste; hydraulic engines steer and hoist; other engines run auxiliary boats. The British war vessel Victoria had eighty-eight[2] of these auxiliary engines interacting with or supplementary to the main engines. The modern steamship may be said to be manned with a crew of engines as well as a crew of men. So do machines interact and aid each other in all lines of productive activity. Steam ploughs prepare the

way for the drill, the drill for the reaper and binder, the binder feeds the threshing machine, the threshing machine feeds the flour mill, the flour mill and bakery hand their produce to the locomotive and steamboat and thus feed the world.

The problems also, of the discovery and mastery of material, and of physical force, out of which and by which to make products, have been adequately solved. Every continent is now fairly opened, and all are found to be full of wealth of soil and mineral. Coal is found in all parts of the world. The steam engines of the world, by the use of coal, now do the work of one thousand millions of men.[3] There are twice as many men of steam in the world as there are men of flesh and blood, and they are all intensely working. Each man on the average the world over, has two slaves of steam working for him. Force to sustain these and to make any needed multitudes like them is at hand. Coal will supply the world with force for some thousands of years to come. When coal is exhausted, we know that a vast store of unused force exists in sunlight, only one thousandth part of it being at present used by man and vegetation together. The sunlight that falls on New York city and Brooklyn would if collected run all the steam engines of the world.[4] Enough sunlight falls on the state of Pennsylvania, to make every man within its boundaries a millionaire inside of a week. Hence we say the problem of production is essentially solved.

A thousand million of steam men are at work in

the world. In labor performing machinery we have at least two thousand millions[5] of men of steel and iron working by their side. The world over, six steam and iron slaves are working for every man. In the United States, eighteen of these are working for every man, six for every individual. At the time of Christ, there were sixty millions of slaves in the Roman Empire; there are four thousand millions of machinery slaves in the modern world. Those hosts of bondsmen who created a material basis for the vast civilization of the ancient world are now replaced by vastly more numerous hosts of workmen, vaporous yet most substantial, creating and already having largely created, a concrete basis for that immeasurably superior modern world life which is to come.

PROBLEMS UNSOLVED.

It is thus clear that the problems of communication, of transportation, of manufacture, of the discovery of force and material, have all been essentially solved. In this difficult work of creating a material basis for a new and better world, education has had an increasingly prominent part. But there yet remains the more difficult problem of actually building a new and better world life on this material basis, of converting all our manifold wealth and power into the highest life. Iron has been millenialized but the human soul has not. In this remaining work, education is called to act a still more prominent part. If in the nineteenth

century education has been important, in the twentieth century, education, taken in its broadest sense, must be supreme. Material development left to itself does not rise into a higher, symmetrical life; on the contrary, it, in the main, gravitates downward, and that with crushing force at places.

Great Britain and the United States have led in this material development, and have a richer concrete basis on which to build a new and better life than exists in any other lands, yet both these countries abound in want and vice. Increased wealth of itself has had no power to produce a millenial life. In England during the past four centuries, wealth has increased seventeenfold,[6] while the population has increased only fourfold, yet to-day in London "considerably over one-tenth of the deaths are in the workhouses." "In the United States fifty years ago practically no poverty existed in the sense that men willing to work could not procure the necessities of life," yet there now exist in every great city of the land, masses of confirmed vice and destitution. In New York city nearly the same proportion are buried in the Potter's field that die in the workhouses in London. In 1890 there were twenty-three thousand evictions in New York city for unpaid rent. In the United States in the past fifty years, wealth has increased tenfold and population only threefold, yet the last census shows the existence of over nine millions of mortgages. In the face of all

our material development, want and discontent have developed on a gigantic scale, and so plainly that all the splendor of it cannot irradiate the facts out of sight. New York and London, the two great population centers of the world, the two great wealth centers, are also in many respects the two great misery centers of the world.

The problem of production has been solved, but the problems of distribution and transmutation remain. Privilege and duty alike demand that every energy of attention and earnest work be directed to them. If there be any power in education in general, or in any form of education, direct or indirect, or in education re-developed in more vital alliance with Christian truths, to help men evolve a proportionate and uniform higher life out of a great material basis; any power to make it easier for all to become in many senses the possessors of all; any power to teach rich and poor alike out of how small a basis of concrete a complete and enduring life may be developed; any power to transmute riches of steam and steel, electricity and gold into a higher wealth of ideal and spiritual life; in a word, any power to make moral and religious development more swift, easy and natural, the twentieth century will demand the full exercise of this power.

FIRST TRANSFORMING AGENCIES.

A further examination of some other elements of the heritage which the twentieth century is

about to receive from the nineteenth only serves to emphasize the conclusions already reached. In several civilized countries not only is a sufficient material basis already attained either actually or potentially, but also certain first steps in the transmutation of this basis into higher life have been taken, and certain needed powers of higher organization evolved. A look at these steps of achieved progress will show that they do not lessen but rather specialize, elevate and emphasize the need of education.

I. BUSINESS POWER.

First, is to be mentioned the business or practical power of the age. This has developed itself on a scale and to an intensity, and extended itself with a universality quite unparalleled in the past. Along with the development of the material basis and yet quite above this, has come a power to see and grasp its elements, to use them together, to organize them into most fruitful interaction, for a desired, concrete purpose. The value of push, pluck, punctuality, organization, exactness, good faith, in all immediately practical affairs is understood as never before.

Many splendid and striking illustrations of this practical power are constantly appearing. A few years ago a great railway was pushed out over our unsettled western country faster than the exploring expedition of Lewis and Clark travelled through the same region[7]; ten miles of track were both graded and laid in a single day, over five hundred

miles were graded and six hundred miles laid in seven months, and this though every pound of food used by laborers and every bushel of oats consumed by animals had to be transported into the unproductive country. The Dakotas, where in 1869 not one bushel of wheat was raised, in 1887 produced fifty millions of bushels. *The Philadelphia Record* recently celebrated an anniversary by making a tree into newspapers in the shortest possible time. The standing tree was cut down, the wood made into pulp, the pulp into paper, the paper printed upon with news from all the world, and put into the hands of the reader, all within twenty-two hours' time. The first white child born outside the walls at Fort Dearborn is still living as a not very old man, who can boast Chicago as his native place, and can see the civilization of the world summed up both in that great city itself, and in its World's Fair.

This business spirit is making itself felt throughout all instrumentalities of work, and is helping to transform them into more adequate agencies for the development of the world life. Every man is compelled yearly to be more and more of a business man, or at least to become closely associated with business friends with whom he can consult and who will perhaps direct certain elements and aspects of his life. Every man, if he is not one himself, needs a business manager. The pastor of a church has an increasing number of business interests to direct. The president of a

college must be first of all successful from a business point of view. Among lawyers, business not criminal or constitutional lawyers are now the leading class. There is a general demand that organizations be conducted on business principles, that the state and general governments be so conducted. Civil Service Reform is but an expression of this principle.

This influence is affecting public speaking, literature and art. Thomas Wentworth Higginson not long ago made the remark that within his recollection, the style of public speaking at Harvard Commencements had completely changed. The old oratory of the soaring inflated style, had been replaced by common-sense discussion, pointed matter-of-fact statement. Taking it in all its forms, actual and potential, there seems to be enough practical power in the world to grasp and manipulate the material basis and make a first transformation of it.

This is of the utmost value as far as it goes. It is a first step, an essential element in the higher transformation of the world. Its value as such is seen for example in the creation of the University of Chicago, where was accomplished in three years, what would have been the work of three centuries by the old methods; it is seen in fact in the creation of what is approximately a system of higher universities in the United States in less than a generation; it is seen, to give another illustration, in the marvellous organization of for-

eign Christian missions which now cover the world and are telling with such fruitful power upon the fabric of old beliefs and civilizations as in Japan and India.

But this development of practical business power does not lessen, rather it both increases and elevates the function of education. It increases the function of education, in that education is needed to sustain and propagate the new practical spirit. It elevates its function in that, in proportion to the practical power possessed, there is need of idealism, both intellectual and religious, to control the practical spirit and make it fruitful in the highest way. At the same time, this increase of practical power makes the elevation of the office of education possible. It gives opportunity to devote more exclusive attention to the higher functions of education. The value of business knowledge and method is so immediate and concrete, the returns are so swift and vivid, that the practical spirit is largely self-sustaining and propagative. Popular demand will keep education keyed up to its work in this respect and will create numerous assistant educational agencies to aid in this work, running through all elements and phases of life. In proportion as the first or practical transformation thus takes care of itself will there be room to devote attention to the higher transformations. There are thus both need and opportunity to lay explicit and increasing stress on education of the highest sort.

II. GOVERNMENT BY THE PEOPLE.

Another of the first steps being taken, and powers envolved for the transformation of the material basis into a higher and more symmetrical life, is seen in the extension and development of popular government. The recent formation of Brazil into a republic called forcible attention to this. It was noticed that by this event not only the last empire in the Western world but also the last independent monarchy formed out of a European colony, became a republic. It also occasioned a close survey of the state and progress of the world with respect to popular government. "Out of four hundred millions included in the population of all the countries recognized as civilized, at least one hundred and fifty millions, more than one in three, are under republican government. Add Great Britain, Canada and Australia, whose free institutions are separated by the merest ceremonial survivals, from the republican government, and half of the civilized world is republican—even counting Russia's seventy millions as civilized. And what a half it is! It holds two-thirds of the railroads, nine-tenths of the tonnage, and the same fraction of the steam-power, the coal raised and the iron made. It spins two-thirds of the cotton and wool and has all but five or six per cent. of the daily papers. Four of the six cities over a million in the civilized world, Paris, New York, Chicago and Philadelphia, are all within republics, and the fifth, London, is ruled by its own democracy. Only Ber-

lin, and possibly a seventh Vienna, are under a government not republican in its tendency." Most of "the wealth, the intelligence, the manufactures, the trade, and the happiness of the world are under governments republican in form" or in essence and are thus in the hands of the people.

The people are also learning to use their possessions, material and political, year by year, for higher purposes. They are learning to transform more powerfully and fruitfully the material by use of the political.

Popular government is rapidly developing itself intensively as well as extensively. Each year the people are learning better what they want, what is best both for them and all the world as a unit, and what practical measures to take in order to secure their ends. Each decade witnesses some new advance in popular rights, and some new gain in intelligence as to how to use those rights. Compare the French people as they were one hundred years ago and as they are now; then confiscating the wealth of aristocrats and revenues of the church, now taxing themselves to spend millions on education; then inventing the guillotine, now multiplying printing-presses; then with swords in their hands, now with books and the pen. During the French Revolution each class of the French nation had absolute power, once in the descent from the monarchy of the old regime to the Reign of Terror, and once again in the reaction back to the monarchy of Napoleon, yet none knew how to use their power

so as to establish a new and better order of things. Compare the numerous radical experiments of that era, with the present orderly advance into a higher political life. Compare also the monarchies of the rest of Europe as one hundred years ago they were warring on the young republic, with the peoples of the rest of Europe to-day imitating France and flocking to learn of her at her Universal Expositions. Compare also England at the time of the American Revolution, intent on coercing her colonies, with the England of to-day giving essential self-government to her national offspring as fast as they are able to use it. Compare Germany of forty years ago, its people ignorant of the very rudiments of self-government, some of the provincial diets being dismissed because they neither knew what they wanted nor how to act, with the Germany of to-day, the repressed will of the people compelling the Kaiser, with the greatest army of history at his back, to yield or concede not once but often.

Literature, perhaps, as sensitively as anything else reflects the spirit of the age. The literature of to-day is the people's. The time is not far in the past when almost all literary men were but ornaments of the court, as they were in Louis the Fourteenth's day, or servants of the nobility. Tennyson was the last poet of the aristocracy and even he conceded much to the people. The literature of to-day is addressed to the people, and gets its vital inspiration from them.

This development of popular government is one of the first steps in the transformation of the world, an essential element in the making of a higher life. The world must be elevated as a unit, by the people themselves, or not at all. It however does not diminish, it rather increases and elevates the function of education.

Daniel Webster said in a characteristic way, "On the diffusion of education among the people rests the preservation and perpetuation of our free institutions." But education has a higher function than the preservative, the safe-guard one, in connection with government by the people. In proportion as self-government becomes easy and natural, that is organic and self-perpetuative and self-propagative, a higher and higher type of education is needed in order to develop and enjoy all the possible fruits of such government. For both of these reasons education needs to be as religious as possible. De Tocqueville says, "Despotism may govern without faith, but liberty cannot. Religion is much more necessary in the republic which they set forth in glowing colors than in the monarchy which they attack; it is more needed in democratic republics than in any others. How is it possible that societies should escape destruction if the moral tie be not strengthened in proportion as the political tie is relaxed? And what can be done with a people who are their own masters, if they be not submissive to the Deity?" But more even than this can be said. The religious spirit is

needed in a people not merely for its usefulness as a safeguard, to preserve and perpetuate free institutions. It is needed in order to develop such institutions into their full fruitage. For both these reasons, in proportion as free government spreads and intensifies, education should not only be made general, but spiritualized in every possible way.

III. OTHER FIRST TRANSFORMING AGENCIES.

An examination of other first-transformation agencies, as journalism, the scientific spirit of the age, ecclesiastical freedom, already adequately developed in some respect and at work on the material basis, would lead to the same conclusion already expressed with regard to the education needed by the twentieth century. With the evolution of every form of practical or semi-practical power, the more intense does the need of education become, the more elevated is the type of education demanded.

A GENERAL SURVEY.

The material basis and its first-transforming agencies exist in achieved actuality in only a small part of the world, though in adequate potentiality with reference to the rest. The twentieth century may see them actually and fully developed over much of the rest of the world. What will be the meaning of this actual development to the subject in hand? A brief survey, using this broader outlook will show the immensity of the material re-

sults that will thus be achieved, and will add the most pronounced emphasis to our past conclusions.

The smallness of the area within which the past development of the world has mainly taken place has often been a subject of remark. All the principal results of the past history of the world have been achieved within a single narrow belt of the Northern Hemisphere, between the 30th and 50th parallels of latitude. This zone has been the path of empire from India to California. Within this narrow area "the great commanders, orators, philosophers, and prophets of the world have been born"; within it, its Saviour taught and was crucified; its decisive battles were fought, its victories over men and nature won, the past triumphs of humanity and civilization achieved. As a consequence here only in actuality exists the completed basis of a new life. In other words but a fraction of the North Temperate Zone has hitherto been fully utilized by man. At the present time, the limitation is in some respects still greater. Only two continents, Europe and North America, one of these being much the least considerable of all the continents, has been pierced through and through from sea to sea by railroads. Not much more than half of Europe, certainly much less than half of North America have been anything like fully developed in the modern sense.

The great Torrid Zone, containing two-thirds of South America and three-fourths of Africa, with its unrivalled wealth of soil and sunshine has been

scarcely touched. The vast wealth of this zone has been too intense for man's control and utilization by past methods. Its manifold vegetation thrown upward by the moist and burning soil, drawn upward by the full direct rays of the sun, with an almost visible velocity and irresistible momentum, have hitherto flung aside both laborer and plough. But man is now advancing to the conquest of this tumultuous wealth with more powerful implements and forces, with steam in one hand and electricity in the other, and riding upon those many chariots of industry, which, in Mr. Ingalls' phase, have made agriculture "a sedentary occupation." The intense tropic fire is to be subdued into manageable and unspeakable wealth.

The English have projected, and in large part constructed, a telegraph line[8] from the Cape of Good Hope to Cairo. A railroad has been surveyed from the mouth of the Congo to Stanley Pool, and the most difficult part of it constructed; thirty steamboats already ply the Congo; a railroad is projected from the East Coast to the Great Lakes. Thus Africa will, in the near future, be split through from one end to the other with electricity, and from side to side with steam. A railroad is already in successful operation in Portuguese territory in Africa, and it is reported that the natives soon became used to it and patronize it so that it is likely to be profitable. The French have struck clear into the heart of the Sahara with a railroad, and propose to extend the line to the head

of the Nile. There is no more striking illustration of the changes wrought in a hundred years, than the contrast between the French monarch Napoleon in 1796, subduing fertile Egypt with cannon and gunpowder, and the French people in 1893 subduing the barren Sahara with artesian wells and railways.

Similar movements are stirring South America. One railroad already stretches from ocean to ocean, though the valley of the Amazon, garden of the whole world, is still practically untouched.

The vast conservatism of Asia is being roused by such movements as the building of the trans-Siberian railroad, to be the longest in the world, the development of India and Japan. China is being attacked from four sides: from Siberia by the Russians, from the Pacific by civilization in general, in the South and West by the French and English, who are racing for the regions more remote from Pekin, and are projecting railways thither. As in Africa so in Asia, one feature of the development strikingly illustrates the progress of a century. A little less than one hundred years ago, the French Emperor fought the battle and sullied his fame with the massacre of Acre. To-day the French People have just completed a railway from Jaffa to Jerusalem, and have projected and more than half constructed a far greater one from Constantinople to the Persian Gulf.

Thus the nineteenth century, beside the heritage already described, in addition to the two continents

which are well developed materially and partially transformed, will hand down to the twentieth century the three richest of the continents, newly opened for development, together with the wealth and instruments with which to complete the concrete part of this work. To transform these continents aright, the best method of education is needed from the start. To urge on South America to an equal pace with the rest of the world, to tear and dissolve the conservatism of Asia, welding as it does more than one-half the human race into an inert mass, to light up Africa and take from it the reproach of being the continent brightest in sunshine but darkest in ignorance and superstition; to preserve the populations of all these continents and develop them as essential, useful, equal parts of the world life, demands the utmost use of every scientific and ideal power in education and Christianity alike. As the transformation of these continents goes on and new wealths and new knowledges pour back from them, and a new and inconceivably rich material basis of life is everywhere created, every pure and lofty resource will be taxed to control it and transmute it into higher life in the most fruitful way. A new education exceeding the present by virtue of its scientific accuracy and lofty idealism, as steam does the stage coach, will find adequate employment. The utmost efficiency in religious life and method will be called for. Particularly, if there be any new power in a closer and more vital union of religion

and education, the utmost development and use of this power will be demanded.

PLACE OF CONCENTRATING NEED AND OPPORTUNITY.

Many of the facts and conclusions which have been presented in the preceding discussion apply with peculiar force to the United States. In this land the twentieth century will find the richest and fullest material basis for a new life. Here is more steam power, more applied electricity than in any other country, here more wheat is raised, more iron is produced, more coal is mined; here are one-half the railroads of the world. Here every form of practical and semi-practical power is at work on the most extensive scale. Here popular government is most fully developed. More than this, the United States is occupying a more central and commanding position in the world life year by year. As Charles Dudley Warner points out, this land is no longer at the end of the world, it is a central point of its surface, nearer China than any other civilized country, nearer South America, and near many parts of Africa; when a Nicaraugua or a Panama Canal shall have been completed, our country will be at the middle of the world's greatest highway, with an unavoidable commanding influence in the two greatest oceans. Already immigration makes this country the home, the gathering point of the nations. Who can fortell the privileges and responsibilities of this position even in the near future?

Here then, if we measure existing resources, the problem of making an adequate material basis into higher life should be first solved. Here for the world's good, it should be first solved. If all our practical power is in this land made more efficient for higher purposes, the whole world life will be affected more rapidly and powerfully than it could be from any other center. Yet with all these advantages and all these possibilities of useful work, the United States has its negro question, its liquor question, its capital and labor question, its immigration question, all demanding solution before, or at least as a part of any general upward movement. Surely here must men bend every effort to the discovery and utmost development of every educational and religious resource. If there be any peculiar virtue in Christian education, Christian education is here needed in its highest possible form. If there be any unused power in education to give new efficiency to Christianity, or in Christianity to give new power to education, or in a combination of the two to set great elevating forces at work in the world, the utmost use of such power is needed by the century that lies before us, and most of all in our own land.

CHAPTER II.

THE NEW EDUCATION AND CHRIST.

THE OLD AND THE NEW.

LESS than seventy years ago, when the blackboard was invented, its introduction into Yale College was marked by a rebellion of the students.[1] They had been accustomed to recite the geometry of the conic sections with their books open before them, explaining the work from the printed figures, and they objected to being required to demonstrate, without the aid of the text-book, from figures drawn on the blackboard. The incident throws light on the methods of teaching geometry in vogue not many years ago. Now, in almost all schools, the student is required not merely to recite independently of the book, but also to work out and demonstrate by his own unaided efforts a large body of geometrical truth.

Scarcely more than a generation ago almost the only method of teaching arithmetic in general use, was to give the pupil a set of rules without proof or reason; then to place examples before the pupil, to each of which a given answer was to be obtained by the use of some one of the given mechanical rules. The particular rule to be used in the solution of an example was either shown the

pupil, or was left to be determined by him by guess and trial till he obtained the assigned answer. In this way the same text-book was worked over winter after winter till, in the case of nine-tenths of pupils, utter disgust for the study had been generated, in the case of one-tenth a sort of mechanical facility had been obtained, which however was often of little use in the practical work of life.

Under present methods the teacher begins instruction in arithmetic by putting pebbles, or straws, or similar concrete objects in the hands of the child, and asking him to separate or combine them in groups. In this simple and pleasing way the child gets its first ideas of the science of number. Blocks of wood, or squares of pasteboard show the properties of fractions, the child passes on from concrete object to abstract idea, gladly realizing that the latter gives greater facility and power, and thus step by step a rational conception of number and its properties is built up.

SEARCH FOR THE NEW.

These changes are but illustrations of a great general change that has come over the spirit of education in recent years. One social reform and one crying need after another have led men back into the school-room for a remedy. It has gradually come to be realized that here is the great fundamental place of cure and source of power; that in the problem of the world's reformation here is the place of fundamental reform; that if the prob-

lem of sure, full, righteous development of substantially all minds and souls could be solved, all else that is needed to make a better world would swiftly come as resulting details. Men have slowly learned that in the mind of the young child is the one great magazine of unused wealth, the store-house of future power. Having learned this, men have set themselves to work with untiring energy, to search out every such source of new power in the youthful mind. Every implement of science, every resource of experiment and exact measurement, every extreme of self-sacrifice have been employed. Men have given up all else in life that they might be perfectly as little children, and thus learn something new of mind-growth. They have felt their way down into the young mind and groped and listened if haply they might find some new secret of power.

The result is a body of generally accepted new truth and method which is gradually finding its way into educational practice. It is being generally realized that the young mind should begin not with abstractions and generalities, but with the simple and concrete, and learn all it can about these, and thence proceed for the sake of clearly realized advantages to the abstract and general. The young mind is first concerned with things, with seeing and touching them, learning all it can concretely of them. It goes on to use words because it finds out that words are briefer than things, more transportable and exchangeable ;

words enable one to share easily one's knowledge with others, and to get in return the fruit of their labors. The child then goes on to use symbols, because he realizes that symbols are briefer than words, and the use of them gives new advantages. If he begins the study of botany, it is by planting seeds and watching them grow, or by gathering flowers and noting individual interesting facts, till at last the accumulation of scattered concrete facts leads him to welcome a more abstract and systematic study of the subject, in order that he may keep an easy mastery of what he knows and go out into a wider mastery.

ILLUSTRATION OF THE NEW.

Perhaps the best way to make clear and vivid the essence and spirit of the new method will be to quote fully from one particular case. A teacher having a class of boys of eleven or twelve years of age with whom he associates freely, in preparing them for a course in formal geometry, proceeds thus[2]: "Taking the boys for a walk, I drew their attention to the shape of the lot on which their house stood. Its depth was nearly thrice its width, and a low fence surrounded it. As we went along the road, we noticed the shapes of other fenced lots and fields. Counting our paces and noting their number, we walked around two of the latter. This established the fact that both fields were square, and that while the area of one was an acre and a half, that of the other was ten. When we returned

home, the boys were asked to make drawings of the house lot, and of the two square fields." By measurement of the drawings they were led up to the general fact that " of lots of practicable form, square ones need least fencing, and of this fact they wrote out a formal statement."

" One chilly evening the sitting-room in which my pupils and I sat was warmed by a grate-fire. Shaking out some small live coals, I bade the boys observe which of them turned black soonest. They were quick to see that the smallest did, but they were unable to tell why. They were reminded of the rule they had committed to paper, but to no purpose, until I broke a large glowing coal into a score of fragments which became black almost at once. Then one of them cried 'Why, smashing that coal gave it more surface!' This young fellow was studying the elements of astronomy at school, so I had him give us some account of how the planets differ from one another in size, how the moon compares with the earth in mass, and how vastly larger than any of its worlds is the sun. Explaining to him the theory of the solar system's fiery origin, I shall not soon forget his keen delight—in which the others presently shared—when it burst upon him that because the moon is much smaller than the earth it must be much colder; that, indeed, it is a small cinder compared with a large one. It was easy to advance from this to understanding why Jupiter, with eleven times the diameter of the

earth, still glows faintly in the sky." By similar examples, the pupils were led up to the general principle that "Like solids vary in surface as the square, and in contents as the cube of their like dimensions. . . . . Not far from home stood a large store, displaying a miscellaneous stock of groceries, fruits, dry goods, shoes and so on. As we cast our eyes about its shelves, counters and floor, we saw many kinds of packages—cans of fish, marmalade, and oil, glass jars of preserves and olives, boxes of rice and starch, large paper sacks of flour. Outside the door stood half-a-dozen empty barrels and packing-cases. It certainly seemed as if the cost of paper, glass, tin, and lumber for packages must be an important item in retailing. One after another the boys discovered that the store was giving them their old lesson in a new form. They saw that the larger a jar or box, the less material it needed. On their return home they were gradually led up to finding that form as well as size is an element in economy. Just as farms, square in shape, need least fence, they found that a cubical package needs least material to make it, and that tins of cylindrical form require least metal when of equal breadth and height."

Thus the boys accumulated interesting geometrical knowledge till at last they were ready with pleasure to take up a thorough course in deductive geometry, where they found that all the separate truths they had learned were in a sense but restatements of each other; all were composed of the

same few elementary truths, and hence were intimately related, and always available together. Having acquired them in the first place in the concrete, they were also ready to apply them, either singly or as a deductive whole, to other concrete; to use them as a string on which to hang the truths of other sciences, as Botany and Engineering.

FORMS OF THE NEW.

This then is the essence of the new method, to assimilate the interesting concrete first, and then go on to the abstract and general; to learn measurement and drawing before geometry, conversation before grammar, local topography and imitation modelling of it in sand before geography, in a word to follow and aid the natural growth processes of the mind. According as the method has been applied to different branches of study and to minds in different stages of development, it has taken different forms and names. It is first seen in the kindergarten, it becomes the object lesson, manual training is a part of it. Where, as in certain methods of studying geometry, the student works out all for himself, it is called the heuristic or self-discovery method. When, as in the modern method of studying history, the student takes the different original documents and material, and the related geographical and commercial data and compares the different accounts of events and draws his own conclusions, it is the laboratory method.

In the study of language, it becomes the natural method. In the more advanced studies, the preliminary concrete course may be greatly abbreviated. In fact the student is so taught to observe from the outset that he constantly accumulates a general body of material, which serves in part or in whole as a preliminary concrete course for after subjects as he comes to them, and which he apparently sometimes takes up at once in the deductive form.

But however different some of the outward forms, there are everywhere in the new method, the first preliminary course and afterward the deductive course, the student moving along in them by self-activity. Even where not formally adopted, the new method has profoundly modified all previously existing methods of instruction. The kindergarten songs have spread and are used generally in the elementary schools. Students in all lines are set to work observing, collecting facts, classifying, investigating. Thus, though the pupil study Latin in the old way, he may be required as he reads Virgil, to observe facts and collect data relating to the religious ideas of the Romans, or their social customs, or some similar subject, and make a formal statement of these facts and inferences; this is using the new method in connection with the old. Rote-teaching, grading-systems, and other mechanical devices, by which the old systems were bolstered up, have been modified or abolished. In a word the attitude of the teacher and the pupil

toward each other and toward knowledge, have been made radically different. The whole conception of education has been vivified and renewed.

LIMITATIONS OF THE NEW.

What then have been the results of these new methods in education? Valuable as have been the gains in certain cases, it is not too much to say that the general results have as yet, fallen below expectation. Herbert Spencer, one of the most earnest advocates of the new system, said some years ago, "So far as we can gather, the Pestalozzian schools have not turned out any unusual proportion of distinguished men, if even they have reached the average," and then went on to give what seems to him the explanation. Recently, *Nature*, the leading English scientific weekly, expresses the opinion that the results of the new science education in Great Britain have been disappointing. There is general complaint that when children educated in the kindergarten go on to other schools, they "neither know how to work nor how to play." The German schools are said to produce many thoroughly cultured and evenly trained minds, but great men are made no more common among them than in the days of Kant and Lessing. In general, it is patent that there is nowhere any new great abundance of powerful minds arising out of our schools. The problem of a sure development of practically all into a full,

intense and righteous manhood has not yet been solved.

Many particular defects, many undeveloped features of the new education might be pointed out which perhaps to some extent account for its lack of sweeping success, but to our mind the fundamental defect, and the one which more or less includes all the rest, is that the proper idealism has not yet been developed out of the new fundamental ideas. There is abundant material out of which to make, and increasing need for new idealism, but concrete truths have become so multitudinous and attractive that they have come to fill the lives of men with a kind of finality. Idealism as a goal, as a summation-fruitage of all the new as well as old elements of life has been lost sight of by most minds. Prince Kropotkin has shown some realization of the defects of the present new system of education, in his advocacy of a change in the methods of teaching the beginner geography. He would teach not merely local topography at the outset, that is give a knowledge of the native town and its neighboring hills, valleys, and streams, but also teach at the very start the general fact that the earth is a globe.

This is an illustration of what will be found true of all the new education. In all departments, the most general and elevated views should be obtained and used as soon as can be, at the outset if possible. Education has received some new life, but this is largely a physical, or concrete life. It needs a

complete new life. If we go back at once to the great fountain source and inspiration of what is best in modern idealism, we find there a striking parallel and a profound and far-reaching clue to the investigation of this subject.

JEWISH EDUCATION.

Jewish education had much in common with the education of one hundred years ago, and in particular it had the same two fundamental faults which we are now trying to eradicate from the methods which we have inherited. Jewish schools were said to be more numerous than synagogues. According to a significant tradition, one hundred and fifty years before the time of Christ a school[3] had been put in every village by the high priest Joshua son of Gamla, and education been made compulsory. It was unlawful for a Jew to live in a place where there was no school. It was the law that a synagogue might be converted into an academy, but not an academy into a synagogue, because an academy was regarded as the more sacred.

The prevalent system of education had many features that were sound and meritorious, but it had, in Judæa particularly, two fundamental faults, vitiating what was otherwise valuable in it. In the first place, authority was carried to its highest pitch, traditionalism was developed to crushing perfection. The method of teaching was to lay down a principle and prove it from former teachings. The

sayings of the Rabbis "were to be absolutely believed even if they were to declare that to be on the right hand which was at the left, and vice versa." Traditionalism was carried so far that the great Hillel was wont to mispronounce a word because his teacher before him had done so. The ultimate appeal in cases of discussion was not to reason or conscience or experiment, but "to some great authority, whether an individual Teacher, or a decree by the Sanhedrin. . . To decide differently from authority, was either the mark of ignorant assumption or the outcome of daring rebellion, in either case to be visited with the ban." Out of this worship of authority and the sayings of others grew the second fault, the method of merely verbalizing, of juggling with words and symbols.

All must be proved from the words of others, hence the most extraordinary liberties came to be taken with those words, in order to make former sayings fit present needs and desires. Undue reverence for the formula led to the most irreverent treatment of it. Words were isolated and interpreted apart from the rest of the text. Words were shifted about, parts of letters even ("iotas") were transposed. Play on words or parts of words was permitted. The allegorical interpretation was put above the literal. One allegorical interpretation was made the basis of another built upon it. This juggling was carried so far as to impair that reverence for authority from which it sprang. It came to be that "one of the highest marks of dis-

tinction in a Rabbi was to be able to prove creeping things clean, though the Talmud said the reverse." Their system had made the Law mechanical, they had built about the Law a hedge of fantastically derived laws, the Talmud, higher than the Law itself, and yet word-juggling was superior to this higher Law.

GALILEE.

But while what has been said applies with full force to Judæa, it was essentially different in Galilee, the country in which Jesus' life was unfolded. The Galileans were a practical people, busy with the concrete affairs of life, and seemed not to care to spend their lives in hair-splitting and verbalizing. Galilee produced only four Rabbis, and the most noted of these was the champion of common-sense interpretations of the Law. There were no learned Rabbis in Nazareth. In fact, the Galileans, taking as they often did, independent views of the Law and inclining to the "more mild and rational interpretations, came to be looked down on as neglecting traditionalism and unable to rise to its speculative heights." Nevertheless they possessed a practical earnestness and broad common-sense knowledge of the world which gave them perhaps a more vital grasp of the essence of the Law and Prophets than the Judæans had. The caravan routes from the Mediterranean to Palmyra and the East ran through Galilee, while Judæa to the South was relatively isolated and visited only by religious devotees.

Galilee was fertile, filled with a busy, teeming population, while the gray heights of Judæa were comparatively barren and sparsely inhabited. The Northern people did not themselves question the ministry and orthodoxy of Jesus; the practical results of his work and the evident genuineness of his words and principles were enough for them. The Scribes and Pharisees from Judæa stirred up all the trouble in Galilee.

UNFOLDING OF JESUS' MIND.

It is full of meaning to us, in this century, that Jesus' divine truth, his supreme idealism were first revealed as a crown to a busy, practical life. Jesus' own training grasped this broad, active, concrete basis. He was a carpenter and knew how to measure and construct. Climbing to the top of the hill near Nazareth he saw the Mediterranean with its many sails, the commerce of the world white before him. At his feet through Nazareth ran a great caravan route to the East. In it he saw moving, Egyptian and Persian, Roman soldier and Greek tradesman, the land commerce of the world. Looking up the valley he saw for sixty miles a country of unbroken fertility. Thus his mind spead out over the busy practical world. Here he studied nature also most thoroughly. He learned to know the fox, the sparrow, the scorpion, the vine. Hence as his mind was unfolded in and about his home and in school, it was unfolded in an atmosphere where his own divine idealism had less obsta-

cle than in the South. At any rate in the unfolding of Christ's life, rising as it does out of the busy tides of action to the loftiest excellence of truth and sacrifice, we have a model of development set before us. In all our theory and practice of education, we have taken only a few short steps in imitation of that model.

JESUS AS A TEACHER.

Perhaps of even deeper significance to us is Jesus' own method as a teacher from whatever standpoint his teaching be viewed. An examination shows that modern teachers, in all that is best in the vaunted new education, have but just learned the beginnings of his method. All that is best in the modern educational methods is found in Christ's method. Moreover, we think too, the cure of the defects and limitations of the new education, the germ of all that is needed to complete it, and make it truly effective is found there too.

Jesus' method was to take the busy, practical life about him, and from it rise to the loftiest spiritual truth, so stating this truth that it spread over all life with vivifying power and application everywhere. He began, as the modern teacher has just been learning to do, with the actual life and world about him. When talking to the woman of Samaria he pointed to the well and the water, and spoke of fountains springing up. When Nicodemus came to him at night in the early spring time, he spoke of the high March wind, which even then perhaps

could be heard blowing roughly through the neighboring streets of Jerusalem, and of whence it cometh and whither it goeth. The first place to which he took his disciples was the wedding at Cana of Galilee, where more of life and human nature at its best could be seen than anywhere else. On the other hand it is a significant fact that when he was in the city, he was wont to resort to the garden of Gethsemane with his disciples and thus keep them near the heart of nature. With his disciples he went back and forth through the land seeing the world both of men and nature as it was and teaching them from it. He used the sparrow, the widow's mite, the vine, the fox, the lily of the field, the praying Pharisee and Publican which they saw, as starting points for his instruction. When from a boat on the shore of Galilee he explained to the assembled multitude the kingdom of God, he began with no abstract declaration of the authority of this kingdom, but rather by pointing to fields lately planted and saying "a sower went forth to sow." In the first five parables, the kingdom of God in its various aspects is exhibited as a growth such as is seen in objects near at hand. He was the paragon of object lesson teachers, as when he took a little child and set him in their midst. It makes this part of his method impressively vivid to us, to think that with all his infinite wisdom, he not only thus took what his hearers had just seen or were even then looking at, as the starting point of his instruction, but that he often also prepared the way

for his instruction by some practical act of help or healing. Thus he on one occasion aided fishermen in their work and then taught them to be fishers of men. On another occasion, he drove the dealers in merchandise from the temple, and then called in the people and taught them.

But Jesus did also what the modern teacher has not learned to do in anything like an adequate way, he rose from all starting-points to universal spiritual truth. With the woman of Samaria, he passed on to speak of that water of life, of which if a man drink he shall never thirst. To Nicodemus he spoke of the mystery of regeneration, applying the truth not only to Nicodemus, but to all the world. To sowing and reaping, to growth in all aspects, he gave a universal meaning. In the Sermon on the Mount he rose from allusions to the oppressed, down-trodden condition of those before him, to general, moral and spiritual principles and then applied these to all relations and elements of life. In the ruins of the synagogue at Capernaum has recently been found the cross-piece that was once over the entrance door, and on it is carved a pot of manna. On a certain occasion it is said that Christ followed by a multitude entered a synagogue of Capernaum and he preached to them saying, " Our fathers did eat manna in the wilderness." He used as a basis of instruction that which he and the people must have just seen as they entered the building. But he did not stop there, he rose at once to the saving declaration " I am that bread of life."

The difference between Rabbinic teaching and Jesus' method, is vividly shown at the Feast of the Tabernacles during the last year of his ministry. At the close of this feast it was the custom for a procession led by priests, to fetch water from the Pool of Siloam and pour out the same at an altar in the court of the Temple. It had long been a question of dispute in the schools, whether the water should be poured in a funnel at the top of the altar or at the base. One high-priest had ventured to pour it in at the base, and had by this act brought on a riot in which six thousand people perished. But Jesus stands at this feast and cries, "If any man thirst, let him come unto me." The essence of all concrete ceremony is thus applied with life-saving power to all men. Thus in all his teaching Jesus ever rose to a lofty idealism. He everywhere presents and makes final and supreme that ideal upper half, which modern education in a great degree so lamentably lacks.

FEATURES OF JESUS' METHOD.

Jesus not only perfected the general plan of education, he also perfected essentially, each element and principle of education. Methods, some of which modern teachers use reluctantly, others of which they exaggerate, and some of which they cannot use harmoniously together, Jesus takes and not only does he powerfully develop and freely use each one, he also uses all together not merely in harmony but with fruitful, interacting power.

Modern education "shuns the symbol preferring the real." It uses the symbol only when compelled to do so in order to master the real. It prefers the real, so-called, to such an extent that the material, the concrete to vast multitudes is coming to mean all of life. But much as the modern world makes of the real, it is not too much to say that Jesus makes more of it, that is, of the real essence of it. His parables are an example of this. These are not mere concrete illustrations of moral and religious truth; rather they are themselves the truth, the spiritual framework in all material things laid bare here for a little space, a hand breadth. Jesus takes the busy practical world about him, and cancels out the fleeting and superficial, and reveals a divine worth in each part of it with universal relations. Hence when he comes to the symbol, this is but the essential part of the reality. It is not a mere arbitrarily chosen representative of the concrete, it is the actual, inner part of the real condensed. Such symbols have an aggressive, elevating power which the reluctantly used symbols of the modern world cannot have. Thus in Jesus' teaching, the concrete and the symbol both mean more than elsewhere, and they are used harmoniously because they are in essence one.

Again there is to-day a general outcry against learning by heart, a tendency to relegate memorizing to the place of a merely unconscious element in education. Pestalozzi would not allow his

pupils to memorize. But Jesus taught his disciples the Lord's Prayer and many intense and pointed statements of his doctrine. He perfected principles into rules, not rules like guide-boards but like the magnetic compass. Jesus knew Hebrew, Greek, and perhaps Latin, beside his native Aramæan, and quoted freely from the Septuagint and in such a way as to give a powerful impetus to his discourses. Yet so harmoniously does this element of his teaching work in with the rest that the casual reader scarcely notices it.

Modern education shuns the use of authority in presenting truth, while the old Rabbinic method used it altogether. Jesus distinguishes between the authority of names and traditions, and that of the truth itself. That truth which, if accepted in a childlike way, will demonstrate its saving and developing power, he taught with authority. The principle of authority so used became a valuable element of power in his presentation of truth.

Hence came the simplicity, directness, concentration of Jesus' teaching, which, interacting with the fulness and vividness of his concrete instruction, gives the whole, as a mere presentation of truth and apart from the nature of this truth as a revelation, such extraordinary power to every reader. It is a striking proof of the value of such authoritative teaching, as compared with the sham authority on which the scribes based all their instruction, that it came to be said of him with a kind of unconscious irony, "the people were as-

tonished at his doctrine; for he taught them as one having authority, and not as the scribes."

Modern education aims to develop the individuality of each growing mind, so that, personalities being naturally diverse, each trained soul shall be a perfection of a new sort. Yet one of the complaints is that the new education does not do this so well as the old methods often did, which were so defective perhaps that under them every remarkable mind developed itself in all its peculiarities. The new methods are merely interesting and efficient enough to carry most minds to the same general point of satisfactory development. Thus it is said that students educated in the German schools have a similarity among themselves, and a general thorough efficiency like the soldiers of the German army, but no Goethe or Kant arises. But Jesus' method, going so far beyond modern human methods, seems easily to accomplish the desired result. John, James, Peter, Matthew, Thomas, where shall we find five great men, companions so long, so different as these. It speaks volumes that ignorant men, with the fixed habits of adult life upon them, should be carried forward to such a pitch of development, but it speaks much more that the personality of each should at the same time be wrought out so exquisitely and powerfully.

Thus we find in Jesus' teaching all the valuable elements of a perfect educational method, each developed into extraordinary efficiency, yet no one

of them presented with excessive, laborious formality; no inductive method, or dogmatic method, or object lesson, or language, or memory methods, yet each distinct essence fully developed, all working together in mutual helpfulness as an organic whole, each part applying itself with more fulness at any needed place, all crowned with a perfect, creative idealism. We find here the essence of all that is best in the new education, and the essence of all that is needed.

CHRISTIAN EDUCATION IN THREE SENSES.

Christian education may be defined in a threefold way: as, first, the method in which Christ's own soul was unfolded to the world; and second, as the way in which Christ himself taught men; and third, as a system of education in which Christ's truth is a leading, if not a predominant part. We have now considered the first two of these. We find indicated in them as in a vista, the further development which modern education needs. The details of this needed development will be best considered in connection with and leading up to the third aspect of Christian education. This is the part of the subject which now lies before us.

CHAPTER III.

EXPANSION.

TWO ELEMENTS IN GROWTH.

GROWTH as a process is made up of two principal parts, enlargement and organization; of enlargement, as when a small snowball grows to be a big one, or when one cell produces its like and these in turn a multitude of similar ones; of organization as when a mass of metal is made into a watch or an aggregate of cells into a system of organs aiding each other in the processes of life. Education takes the various elements of growth in the human being, and aids, economizes, systematizes them. Our method of considering and determining the place of the moral and religious element in education, the place of that which is distinctively known as Christianity, will be to consider its relation to the various elements of growth.

EXPANSION ILLUSTRATED.

First, then, in growth we have the element of expansion. In Japan there are oaks which, though fifty years old, are not more than ten or twelve inches high.[1] Some of these were exhibited in London a few years ago. On the other hand so magnificent is the growth of the oak in India, that

some species reach a height of over one hundred feet, have leaves over a foot long and acorns so large that the acorn cups are two-and-one-half inches in diameter. Of those persons in Europe and America familiar with the oak, probably not one in a dozen, perhaps in some cases not one in a thousand, ever thinks of the possibility of this tree being very different in any part of the world, from what it is in the home neighborhood. When one hears of these diverse forms of the oak which have been described, particularly of the giant oaks of India, there is experienced a mental expansion, an exhilaration, an enlargement of ideas. This illustrates what is meant by the expansion element in mental growth. The simplest form of this is what may be termed magnitude expansion.

MAGNITUDE EXPANSION.

Everyone blest with eyesight during life time looks at the sky thousands of times, yet few ever try to stretch the mind to an adequate grasp of the sky as a vast sublime object. Let one think first of the small dome covering some court house bell, then of the dome of the capitol at Washington, then with increasing effort of a dome one-half a mile in diameter, and so on till in time some conception of a sky many miles in diameter is formed.

The conception is aided at first by thinking of the vault above us as made of blue steel and of the clouds as drapery upon it. Finally some conception of the celestial sphere such as the astronomer has

is arrived at. In all this process there is an effort, the mind quivers and totters as if it longed to be back in its old shrunk up state. But if the effort be persevered in, the mind gains a new quality of enlargement; we may think of the brain cells as actually swollen and unable to shrink back to their former dimensions. Then the comprehension of all lesser magnitude, the enlargement of the ideas to all lesser degree is found to be easy.

When we read of the butterflies of South America whose wings measure twelve inches across from tip to tip, of earthworms in Australia from two to three feet long, of fossil lizards[2] eighty feet long, weighing twenty tons when alive: or of some vast enlargement in modern civilization which we must grasp and use if we would do our function in the world, as of sixty thousand new books published each year, of London as a city twenty miles in diameter, of various extensions and fluctuations of commerce, life and thought, to grasp these is not only easy but an exhilaration.

Almost every intelligent person has heard that when the earth is moving most slowly, its velocity is eighteen miles a second. Yet to truly realize this requires much stretching of the ordinary mind. Let one think of some familiar part of a railroad route, eighteen miles long, of the villages and principal objects of interest along the track, then with the finger on the pulse and while the pulse beats once, let the mind flash past all these objects spread out along this space of eighteen miles. In

this way by repeated effort some realization of planetary velocity may be arrived at. Perhaps the mind can go on developing thus and stretch itself to some conception of the velocity of light. Let one conceive of mirrors placed round the earth's equator, so that light will flash from one to the next and so on round the world. Then as we stand by its track with finger on the pulse, while the pulse beats once, the ray flashes past us eight times, and in each of the seven intervals we know that it has flashed once round the world, and if we can flash with it we realize its motion. Then to realize all lesser velocities, that of sound and rifle balls and nerve action, and far more valuable than all, that of news and thought and love, the millionfold flashings of life the world over, becomes an easy pleasure.

If with finger on the pulse we flash ourselves through space with planetary velocity, eighteen miles each pulse beat, from sunrise to sunset on a long day, in that time we measure off in definite experience the vast expanse of the sun's diameter. Our faculties are expanded to grasp in some measure the vast energy contained in his huge mass, the force of gravity which at his surface would cause a man to weigh two tons, the vast reservoir of heat which working against gravity causes explosions in the surface tearing out holes into which fifty earths could be poured like so many peas. The mind being expanded to some comprehension of this, the grasp of all lesser aggregates of force is easy, of sunlight on the earth, of sunlight stored

in coal, of movements in the world's history, of forces now poised and balanced in society, and ready to explode with destructive energy, or unite and develop with fruitful regenerative power the world over.

These are examples of the direct enlargement of some power of the mind, as the perception of physical magnitude, velocity and force. In like manner there may be magnitude expansion of the other faculties of the mind, of the perception and grasp of great spaces of time, of the imagination, memory, the reasoning faculties, of the affections, emotions, and moral and religious powers.

II. DIVERSITY EXPANSION.

Beside this magnitude expansion, there is an enlargement of quite a different sort which may be called diversity expansion. This brings one to realize how many differences in form and color, in number and relative size and position and function of parts, a familiar object may have. The hedges of narrow experience are torn down, and the vast wealth of diversity and varied complexity in things is revealed and grasped and made a basis both of growth and work. Most people are accustomed to and have fixed in them the idea that the supporting framework or skeleton of an animal is inside the flesh. When it is made clear that in a lobster or crab the arrangement is reversed, the skeleton or solid framework being on the outside and the flesh inside, one experiences a distinct enlargement of

the sense of diversity, there is a valuable realization of the richness of differences in organisms.

The natural color of the teeth in animals we are acquainted with is white, but we learn that some animals have red[3] teeth; the birds we have seen have spurs on their legs, but we read that some birds have formidable spurs on their wings instead of on their legs; the tails of birds known to us, have no other use than to help steer the possessor during flight, but we learn that the tail feathers of some birds of the wood-hewer family are curled over and made into a sort of hook by which the bird can suspend itself when engaged in boring into trees for food. We study botany and learn that the potato is not a root but an enlarged underground stem, that an apple is but the calyx of a flower enlarged, the strawberry but the enlarged receptacle of its blossom. These diversities being comprehended, it is easy to grasp others lying nearer perhaps to practical life, as that the essence of the sewing-machine, consists in the simple diversity of putting the eye of a needle near the point instead of in the head; that a process like grinding wheat into flour is not necessarily a simple one, but may be a varied and complex one so that almost every miller has his own method and hence innumerable diversities in qualities of flour arise. In other words the mind is thus gradually made ready for perceiving and using valuable diversities everywhere in life. This sense of diversity may be cultivated in a more wide and sweeping way with

correspondingly valuable results. The people of the earth have never seen more than one sun in the sky, all history tells of but one sun there, the majority of people have never had the idea of the possibility of more than one sun. Moreover this sun is white in color and most minds have never thought of the possibility of its being different in this respect. Thus as a consequence they have never thought of the possibility of any other day and night than the simple white day and black night which we now have. But the astronomer shows us that double suns do exist elsewhere, and that these are often not white in color but blue or green or red. Hence other worlds are possible where there may be a red and a green sun in the sky at the same time. When they shine together, there will be white day by the combination of complementary colors. When one sun has set, the other will shine on, thus a succession of first, green day, then white day, then red day, then black night is possible. The conception even when worked out no further frees the mind from a host of the most fixed and positive limitations. The reception and origination of the new and diverse in broad and complicated ways is made easier. The time will come when the world's supply of coal will have been exhausted, and when mankind will be dependent on sunshine as it comes directly from the sun, and not on it as stored up in geologic vegetation. Then the regions of the earth where there is cloudless sky but fertile soil and underlying seams of

water, will become the centers of civilization. The Sahara may be the England of the future. Conceptions like this when fully realized give this sweeping diversity expansion, which makes it easy for the mind to swiftly grasp and adapt itself to any present local change in the world life.

VALUE OF EXPANSION.

It would be difficult to exaggerate the value of this expansion element in growth. It is the first and essential half of growth. It is present, and a necessary element in the simplest act of development; it is a part of the loftiest acts of genius. In some elementary form at least, it is a part of all living existence, while on the other hand the richness of its possibilities are never exhausted. It characterizes the growth of the child and of the man of genius alike. The instinct of expansion is the first strong one in the child, the desire and faculty of organization coming later. Mere magnitude expansion is a sufficient pleasure to the young mind; to talk of a thousand houses, a million houses, of a million million houses or persons or dollars, is an unfailing delight. A girl, a waif from New York city when taken to the seashore for the first time gazed long and silently out over the ocean, and when questioned expressed her profound pleasure by saying that she had never seen "enough of anything to wunst before." She thus also expressed this growth trait of childhood. Not only is this quality thus the basal element in elementary

growth, it is the most fundamental element in greatness. Emerson is fond of showing that great men differ from common men only in the possession of a larger measure of the same qualities. Nature or training or both have given them a larger expansion. Magnitude expansion fully possessed gives the soul a Miltonic quality, diversity expansion fully possessed gives it a Shakespearean fulness and richness.

I. IN ASSIMILATION.

Nor are some of the specific ways in which this part of growth is of value, difficult to see. When rightly used it is of greatest value in assimilation. Prof. Boyesen, a Norwegian by birth, and knowing almost no English came to this country as a young man. In a few years he made himself one of our most charming public lecturers, distinguished among forty millions of natives for his perfect enunciation with scarcely a trace of foreign accent and for his chaste and expressive diction. He was trained in elocution by that master, Lewis Munro of Boston, who taught him not by mere conversational methods but by having him whisper across a large hall, compelling the strongest and most precise development of the vocalizing powers; having acquired proficiency in this exercise, distinct and accurate enunciation in conversation and public speaking was easy. He trained himself in the use of English, by reading only the classics in our literature. Having learned the adequate

expression of the fullest and richest thoughts, the expression of all simpler ideas required little effort. This is the source of value in all technique training, to give one's powers in any given line all possible magnitude and diversity expansion, and thus acquire inclusively all lesser powers of the same sort.

In the study of Latin, if the pupil read a little Cæsar and then much of the more difficult Livy, all the rest of Cæsar will be easy. If the musician learn to play the fugues of Bach, then vast masses of other organ music will not be difficult. If the student learn to read as soon as possible the mathematics of Laplace and Gauss, all preceding mathematics is mastered. It is possible in time to acquire such a general expansion and such comprehensive sense of diversity, that it will be easy to grasp at once the great inclusive principles of a new subject as well as the peculiarities of its details. On taking up a new language, the mind is ready and expectant for a host of new idioms, any variety of new inflexions. On taking up a new science like botany, one is not surprised to find a stamen or a pistil with any diversity of size or shape, position or color.

II. IN DISCOVERY.

Expansion is also of fundamental value in the discovery of new truth. Many men could think of objects at the surface of the earth as falling toward its center, or of objects as high as the tops of the

mountains as so falling, but it was the Newton whose mind had magnitude expansion and who was able to think of the moon, a quarter of a million of miles off, as so falling, who discovered the law of gravitation. The optician who first invented the telescope had such a narrow world, that he could use it only in gazing at and bringing near the weather vane of the village church. Galileo who has widely meditated for years on the universe, at once points the new optic glass toward the heavens and discovers the mountains on the moon, the phases of Venus and the satellites of Jupiter. It was Goethe with his poet's mind so full of the sense of diversity that he could see a single hairlike fiber of the flower as a leaf, who discovered the fundamental law of botany. It was Kepler with his mind teeming with all kinds of possibilities, thinking of the earth as an animal and the forests as fur on its back, who discovered the laws of planetary motion. It was Pythagoras who dreamed that he could hear the music of the spheres, who discovered that the square on the hypothenuse of a right triangle equals the sum of the squares on the other two sides. After Herschel had discovered the planet Uranus, it was found that Lemonnier, in making his star catalogue, had previously more than once observed the same planet, mistaking it for a fixed star. On one occasion he observed it two nights in succession and finding that the observation of the second night differed from that of the first, he rejected the first observation. If he

had had a mind open to possibilities, brimming and teeming with conjectures and anticipations, he might have recognized in the discrepancy a possible motion and used it as a clue to a new discovery. A new planet might have swimmed "into his ken" instead of Herschel's. It is the man who is surprised at nothing, but delighted at and able to grasp every new form of reality, who makes discoveries and leads the human race onward.

III. IN PRACTICAL LIFE.

So also when we come into the realm of the practical application of truth, the value of this element of expansion is seen to be none the less. The successful business man has expansion of some sort. He is equally ready to make one thousand per cent. on one transaction, or to make one-eighth of one per cent. on ten thousand transactions. He has grasp of time, space, multipliers, diversities. He is ready to learn from any person or place. No hedges shut out useful information from him. His market is the world. This expansion is one of the fundamental qualities of all great leaders and men of action. Cæsar, Mohammed, Charlemagne, Gladstone, Lincoln all have had it. Every one who would effect something in the concrete, must have that diversity expansion which recognizes opportunities and means wherever they appear, and that magnitude expansion which will give every useful germ its utmost multiplier and extension.

Just as from a few chance sparks struck from a stone, perhaps the whole creative element of fire has spread through our civilization ; just as from a feather attracted by rubbed amber, all our civilization has been set thrilling and germinating anew by electricity, so each man must be prepared, if a new germ of use, or good, or truth appears in no matter how humble a form, to make out of it a new creative element in the world life.

MEANS OF ATTAINING EXPANSION.

We find therefore that this expansion of soul is of the highest value in assimilation, in discovery, and in practical work; in growth and the use of growth alike. It is of the first importance in all kinds of work whether assimilative or creative. Such being the case, the problem set before the educator is, how most effectively to aid the mind in acquiring expansion. All knowledge contains that which may be made to give expansion and as human knowledge enlarges there is an ever increasing wealth of means to help the educator in this process. Every subject of study contains material which can be used in aiding this process of mind expansion. When the student takes up any language beside his own, he finds inflexions, idioms, grammatical rules radically different from those in his mother tongue and giving his mind a marked diversity expansion. Hence emphasis is laid on the fact that every person should study at least one language beside his own. Philology

in its widest sense has a still greater value of this sort.

Mathematics dealing as it does with the very idea of extension and carrying out abstract quantity so often to infinity, is peculiarly fitted to give magnitude enlargement to the mind. The hosts of new facts brought to light by science give the mind diversity and often magnitude expansion. Astronomy gives fundamental magnitude expansion of all kinds of unequalled value. Botany and Zoology give both kinds, particularly the former. Archæology and Geology, carrying the mind back, as they do, over vast spaces of time and dealing with great earth movements and forces, give magnitude expansion, and showing us altogether strange forms of life or still existent types in greatly different forms, give diversity expansion. Psychology enabling us to realize all sorts and qualities of mind, gives one's own mind, a most valuable enlargement. History and Art both have an essence which enable them to perform the same function.

Not only is there thus an ever increasing wealth of specific intellectual means by which to give this expansion, the general life of the world, the developing material civilization also furnishes an increasing wealth of means to aid in this process. To broaden and enlarge is one of the chief educational functions of travel, and we have already spoken of the increased facilities of travel and means of supplementing it. Less than one hundred years ago Sir Walter Scott complained that it cost him fifty

pounds to make a trip from Edinburgh to London; to-day the same trip can be made for less than three pounds. Photographs, various processes of engraving, illustrated magazines have been multiplied till by them every one can be carried vividly out over all the world. Inventions, all the diversified material development in the midst of which we are, all have a great enlarging effect.

DIFFICULTIES AND LIMITATIONS.

But with all this ever increasing wealth of both intellectual and material means of giving expansion, the process has by no means been made easy. Comprehensive and symmetrical soul expansion still remains difficult. To rightly aid it, is one of the most perplexing problems which the teacher has set before him. How hard it is to really communicate a full and permanent expansion is shown by the fewness of those that acquire it. When it is given by purely intellectual means, it is a question whether it can easily become complete or fruitful in the highest way. Some one concrete or semi-concrete element too often expands and satisfies the soul to the exclusion of other elements. So-called practical ideas expand to the exclusion of ideals, though indeed the latter are often far more broadly and fundamentally practical when understood aright. If memory or imagination or reason expand till the one enlarged element seems to make a complete existence. Men think they are enlarging life when really they are only deep-

ening and lengthening the rut in which they are, thus making it harder to get out of. Like the fish they learn to live in the water so well that they never learn to live in the air. Like the ostrich, they learn to run so well, that they never learn to fly.

It is also a question whether the modern material methods of expansion do not shut in the soul in some ways, as effectively as they expand it in others. In many young lives one is reminded of celery plants whose roots, before they have been set out, have been dipped in clayey mud instead of wet loam, as gardeners sometimes make the mistake of doing. The plants are strong and thrifty, the soil is rich, the weather favorable, but the plants do not grow; as fast as new leaves form, old leaves fall off in yellow blight. On investigation the gardener finds about each root a lump of hardened clay forbidding growth. So does the materialism of this age harden about the roots of many lives and prevent vigorous, expanding growth.

If expansion take place at all there is everywhere this general difficulty, that it is likely to become tyranny of some sort, to be an over extension of the individual; the one person or a trait of him spreads out over the world in some self-aggrandizing way. This is particularly true if expansion take place in a concrete or semi-concrete form. It makes Napoleons or Jay Goulds of some kind, who devastate and absorb smaller lives instead of enlarging them. If such expanding existences meet

each other, they clash and are hardened back, in stead of helping each other and all other individuals to expand further, to complete each other through and through all things.

Such then is this expansion element in growth, and such the secular means of aiding it, and such the accompanying difficulties.

EXPANDING POWER IN MORAL AND RELIGIOUS IDEAS.

Let us now consider the relation of moral and religious development to this part of growth. The ideas of religion rightly and fully used are capable of giving a vaster and better expansion than any others. Full religious development requires a grasp of space and time and energy and consciousness and love and various combinations of these, such as is required no where else. A grasp of time for instance is required which carries the mind back to early Hebrew times, earlier still to the first civilizations in Egypt and Assyria, nay to the beginning itself. Some effort is required fully and definitely to grasp a space of even a few weeks, it takes much expansion to be able to grasp a lifetime, but he who would take in the full scope of religious truth is compelled to try to grasp a past which includes all other spaces of time as mere points. In like manner the idea of immortality carries him forward to approximate a grasp of an unlimited future. So also does the fullest religious development require the utmost grasp of space and

power, so that all our starry spaces shall be a mere speck, all the sun's energy a mere spark.

The effort to get an ever fuller conception of God has a profound growth-causing effect, and produces manifold expansion throughout the soul. It is of great value to try to enlarge our minds to some realization of the consciousness of a great man. Merely to catch up some little details of his character, to combine these, to try to realize them all together as some little portion of a great consciousness gives both a diversity and magnitude expansion to the soul. To stretch one's thoughts out beyond some one quality of a mind like Shakspeare's is an education, while to realize fully the breadth and fulness of that mind is to become great oneself. What then shall we say of the value of an effort made in all devoutness to enlarge one's soul to a realization even of some little details of God's nature, some aspect of his greatness and fulness? If the other can produce growth, beget greatness of soul, what growth and greatness does this produce?

Of profoundest growth-causing power of all is to try to comprehend in some way Christ's spirit of love, that is the love of God as revealed in him. To try to realize for some moment the spirit of self-sacrifice which filled men like Arnold Winkelreid or John Maynard or Leonidas in some hour of supreme exaltation of self-sacrifice, requires an effort of expansion. From a phrase uttered by them, or a portrait out of which the soul speaks, or a vivid

account of their deeds, to make one's self feel even for an instant as they felt, to realize their breadth and intensity of self-forgetfulness in the desire to help others, gives a truly vital expansion of the soul. Further, to realize the souls of men who, like Hampden and Lincoln, have loved a nation or a race, begets a still greater expansion, a largeness of sympathy which includes many other kinds of growth. What shall we say then of a realization, however dim and partial, of that spirit of love which was in Christ not for a moment or an hour but constantly, not inspiring and governing any one act merely, but the whole scope and all the details of his life, not applying to a race or a generation, but to all mankind, and extending to the extremest humiliation of life and pain of death? It begets a fundamental and comprehensive enlargement of soul that makes time short, the world small, all work easy, great in itself and begetting all other kinds of expansion.

Not only do religious ideas thus give the broadest possible expansion, they also give, when rightly used, a harmonious and complete enlargement. The religious co-ordinates and stimulates all other expansions within one. It does not exclude, or stunt, or harden back the development of the ideal element, or the practical, or the intellectual, or the emotional, rather it helps develop these and urges on their development in every possible way as an aid to itself. If mathematical ideas of space or the facts of astronomy have any power to give us a

wider grasp of space or power, then religious growth suggests and demands their utmost development in order that by measuring space the extent of God's presence can be the better realized, by measuring time, the duration of his goodness be the more fully apprehended, and in all ways the resources of his power be the more adequately realized. If the facts of science have any power to help us conceive the fulness of diversity in God's methods and nature, then religious growth demands their utmost investigation and discovery. If language has any new power to express sympathy and love, religion demands its utmost development. If photographic art, electricity, and steam have any power to make the brotherhood of man a more practical fact, then is their extremest use demanded by every form of reverence and devoutness. Thus all forms of expansion are made parts of one great enlargement, and are but filling in of details of that process.

If religious expansion be thus made fundamental and controlling, perhaps the most important result of all will be that each expanding individuality will not be self-aggrandizing, will not devastate and absorb, or harden back other expanding souls; it will rather stimulate and aid all other souls to enlargement, and be aided by them, so that all will be expanded by reciprocal help, through and through all. There will thus be an external symmetry of expansion, as well as an internal one. There will

be generated among men a general spirit of expansion carrying all forward to a fuller life.

The power thus inherent in religion to aid all other forms of expansion and itself to be further completed by them, may not have been fully realized or used in the past. But this inherent power nevertheless exists, and with each new need and with each new realization of the added fulness of life to be attained by a free and vigorous use of it, it will be made more and more available. Rising through the past we find indications of what this power will achieve when fully employed. The magnificent record of the Hebrew race in all lines of great performance is an illustration of it. The religious races in general are the expanding and achieving ones. Every race with a true and intense ethical or religious spirit has been expansive in some way, the Roman and English in government; the Greek and German in philosophy; the Hebrew and English in poetry and colonization and missionary enterprise. The enormous power in religious expansion is shown in such experiences as conversion, when the whole being seems suddenly to enlarge out over time and space, to expand in love and faith and many forms of vast inclusive growth, accomplishing in an instant the result of years of ordinary growth. The power of a fundamentally religious expansion to keep the enlarging soul in harmony with all others, to make it incalculably helpful in stimulating them, whether they will or no, and thus perhaps in time to govern all the ex-

panding elements of civilization into harmony and the highest fruitfulness is shown most impressively in the cases of such men as Paul and Luther. Such men and such instances are but a prophecy of what can be done in the future.

CHAPTER IV.

ORGANIZATION AND EXACTNESS.

SECOND PART OF GROWTH.

IN the last chapter, the first and everywhere essential element of growth expansion, was considered. The second half of growth, is organization, or, as it may sometimes appear, re-organization. Mere amorphous enlargement is not enough. It breaks down in time and ceases to be of further use even if it be further possible. The atlantosaurs of geologic times, eighty feet long though they were, passed away because they had not a high enough organization. A newspaper in the city of Philadelphia, managed by somewhat loose business methods, had apparently reached its limit of growth. An organizing man, one who could determine the daily cost of each item of production and suggest plans accordingly, was put into the office. The rest of the force remained practically the same, but in the next four years the paper was able to grow fourfold. Growth is not merely the expansion of a gas, it is the expansion of the tree, and that perhaps of the fruit tree, where every few years a new and more highly organized variety replaces the old. The really growing mind is not merely able to grasp any magnitude or velocity,

and expectant of any diversity. It also tests and sifts out the unreal. It is not merely expectant of any emergency, or good fortune, or disaster; it is also able to test all appearances, to search out the real and measure and use them, till it is organized into fitness to meet and utilize all opportunities. Mere extended and unorganized memory makes the encyclopedia; mere extended imagination makes the dreamer; mere action makes the disturber. The diversity expansion which enables a mind to imagine the centaur is of some value; but that which enables a mind to conceive of the locomotive is worth more. The mental power which enables one to think of the vast multitude of stars as sparks flying from some anvil, or to take a flight through them from system to system, like that made in the famous dream of Jean Paul Richter, is worth something, but of itself it makes the mere visionary. The man that really grows, forms many such conceptions, tests and retests them all till he finds one like that of the great nebula once filling space and breaking up to form suns and systems, and thus brings his expansion into definite accord with reality. To be able to think as Macaulay did of the day when the Fiji Islander should sit on the broken arches of London Bridge and muse over the ruins of what is now the metropolis of the world, is worth something. But it is worth more to think of the day when the factories of Birmingham and Sheffield will be transferred to the Sahara; for when the earth's supply of coal is exhausted, this

or something like it will come to pass. Columbus had expansion but he had something more. Many dreamers before him had thought of flying through space and about the earth on Pegasus-like animals or magic carpets, conceptions requiring quite as much enlargement of mind as Columbus had, but it was Columbus, whose expansions were organized, who had dreamed and tested, whose idealisms were tempered by a thorough knowledge of navigation and mathematics, who saw not only the wealth of India in his visions but also the birds and sea weed that actually passed in air and wave by his ship, it was this Columbus who grew and made the world grow.

Newton had extraordinarily enlarged powers of mind, the solar system way a toy in his thoughts. But he had something beside expansion, he had an equally extraordinary perfection of organization of faculties. He could take his great idea of gravitation and sit down by a pendulum to test and retest it. He could wait for twenty years till new measurements of the earth and new mathematical processes gave him tests warranting certainty.

In Lincoln and Gladstone we see men with broadly expanded souls, capable of love for whole races and nations, but in them we find something beside the vague largeness of the dreamer. We clearly discern in all these men souls intensely organized to meet any emergency or opportunity ; powers, simple, but also subtle, complex and coherent.

ORGANIZATION AS A PROCESS.

It is often most instructive to watch a process of growth and observe its stages, first the crude, large outreachings of the nature, then the gradual organization and co-ordination of these into superior effectiveness. These stages can be distinctly traced in the development of the disciples of Christ. In the early part of his ministry, the disciples appear in the main in a more or less passive and receptive attitude, but about the middle of his ministry, there was a marked awakening among them. Their natures began to reach out and act, showing great earnestness, love, ambition, often meeting with great success and often with failure. They could not heal the demoniac son, but when sent on their mission, devils were subject unto them. James and John when they ask "Wilt thou that we command fire to come down from heaven and consume them," show great earnestness and faith, but these in a very crude form. The expanding personalities of the disciples began to clash, they contended as to who should be first. But as time went by, discrimination and organization came to them and they became the harmonious and effective body of disciples which spread Christianity over the world.

When Christianity and Roman culture were introduced among the Germanic hordes, they produced at first a like crude development of the natures of these peoples, marked by acts of sublimest self-sacrifice, displays of immense energy, which

often came however to clash in huge, irregular fashion. But all those irregular developments in Northern Europe have since organized and inter-organized till those lands have become the most highly civilized part of the world. Every new wave of culture that spreads over America as the art movement after the Centennial Exhibition of 1876, extends itself at first as a homogeneous flood, but afterward breaks up and becomes organized in each section of the country to suit the peculiar needs and develop the highest fruitfulness in that area.

As with all other growth, so it is with growth in the young mind. Here also come first those expansions which are manifested as the romantic hopes, the boundless faith, the vivid dreams, the various impulsive enlargements of youth. Later this expansion becomes definite, each extended faculty learns discrimination, comes to act slowly or rapidly, is filled with organs and channels, is made into elements and tissues, which are grouped and regrouped into effective arrays among themselves. Thus each expansion is organized, and all different ones are united into a coherent whole and made fruitful together.

ACCURACY THE BASIS OF ORGANIZATION.

The second half of growth then is re-organization. In the accomplishment of this second half, many factors enter, but the most fundamental is the spirit of truth. With persistent loyalty to

truth, organization adapted to all needs and capable of the highest productiveness will come. True growth is expansion in accord with reality.

If we examine any of the highly organized growth products of the world life, we find that accuracy, precision of all orders, is fundamental. Compare the German army of the present with ancient hordes that once warred in the same land. An accurate measure of Germany's position and relations in modern Europe, an accurate training of each man and body of men, accurate weapons, careful measurements of forces, roads, foods, all this aggregate of accuracies large and small, is the basis of this great organization. Consider also Greek art and philosophy. Careful measurements have shown that many lines of the Parthenon, which were once supposed to be straight, are slightly curved according to carefully studied rules; out of these minute accuracies arise the lightness and grace of that wonderful structure. Compare the Greek language with the inarticulate cries of the savage; the subtle perception and organization of differences of sound and symbol are the sources of the advance. Accurate distinctions extended and developed make Greek philosophy. If we take something so different from these as the triumphs of French cuisine, and ask the basis of its perfection, we find it to be the French chef with his pair of delicate scales, accurately weighing each ingredient, leaving nothing to guess. What again is the basis of our vast, complex modern com-

merce? It is that large accuracy which grasps the markets and resources of the world in true perspective, as well as that minute accuracy which measures an inch to within one five-millionth part of itself, and can thus make all the parts of a watch interchangeable with those of other watches; it is the steamer which crosses the Atlantic, trip after trip, within a few hours of its predicted time, running within a track a mile wide if need be; it is the chronometer by which this steamer runs and which though tossed about in an iron ship by a stormy ocean, can measure a week to within five or six seconds.

ILLUSTRATIONS.

Let the student then observe this objective value of accuracy in the world about him, and in all his work and study. Let him notice that much of the delicacy and beauty of illustrations in American magazines is due to the care with which the engravings are "made ready," successive pieces of tissue paper being pasted on the back of the block of wood on which the cut is, and rubbed off and added to, till the pressure of the printing press will exactly bring out each detail of the engraving in the right shade. Let him notice that a large business like Wanamaker's is possible only because it is managed with such precision, that a month if necessary will be devoted in tracing to its source a discrepancy of one cent. If he read history, let him observe the accuracy of great commanders

like Napoleon and Frederick the Great, along with their breadth of view, and by contrast, the inaccuracy of inefficient generals. At the battle of Chancellorsville, Gen. Hooker is said to have dashed off an order, omitting all punctuation marks. Each of the three corps commanders to whom it was sent, interpreted it differently. The confusion which resulted was in a large measure the cause of the loss of the battle. If the student read law, let him notice that the omission of a single letter may invalidate a legal document. A valuable claim, involving thousands of pounds sterling, was lost because of the use in a legal paper of the term "Sheriff of London," instead of "Sheriffs of London." If he study mathematics, let him observe the destructive effect of a single mistake in multiplication. If he study language, let him notice the misconceptions that can result from one omitted ending. Let the value of accuracy be so impressed on him that he shall strive earnestly for it and prize as valuable possessions all new finenesses of reality. If the spirit of verity become thus organic in him, it will have a profound re-organizing power over him. It will modify the very structure of his mind, it will organize anew its functions.

FRUITS OF ACCURACY.

It will aid his memory by fixing sharply resemblances and differences. It will develop the acuteness of his perceptions. Sir John Herschel tells

of a man whom he knew and who was blind in one eye, yet had reached middle life without discovering the fact. This could never have happened to a man of conscientious accuracy like Sir John Herschel himself. It develops and strengthens the reasoning faculties, and also co-ordinates them. The effort to be accurate gives not merely greater power over superficial details but also profoundly develops the rational structure of the mind. To be sound in the main principle and at the same time accurate in details and expression requires a double and a newly organized brain, and the effort to attain this ideal, if persevered in, almost invariably bestows this reward of increased and more highly organized mental power. The effort to be accurate often compels the mind to search down into underlying principles. In order to be accurate in details, the student frequently finds that he must first be correct in the main principle, hence the mind is required to develop its searching powers. It therefore becomes a frequent and familiar experience with a teacher on picking up a student's paper and noticing it to be absolutely without punctuation marks, homogeneously unpunctuated and unparagraphed, and very heterogeneously capitalized, to feel sure at once that there will be mistakes in main principles, a partial and one-sided grasp of things everywhere apparent and showing imperfectly organized faculties. If writing of the planet Venus the student spell it "Venice," he is not likely to be able to explain why Venus is

sometimes the morning, sometimes the evening star. On the other hand it is a constant pleasure to the teacher to watch the growth in grasp and reasoning and searching power of the student who has a scrupulous intellectual conscience, and is not satisfied till everything is as correct as may be.

The effort after exactness also brings other elements of re-organization, as versatility and quickness. If one is in a position where he must speak and act at once, and he desires at the same time to be correct in all respects, his mind must act with at least double quickness in order to do the double or more amount of work required, in the same time. He must swiftly perceive not only the general fact but also its details and aspects, and at once choose an act or a word which will fit right down on the complex whole. Again, conscientious accuracy will sometimes after long practice result in an almost poetical delicacy of language or conduct. This is frequently noticeable late in life in otherwise uncultured men. Their consciences may be said to have educated them into partial poets. In a word, the desire to be true in detail, often compels the man to be true in principle, and to be true in detail and principle both, means re-organizing growth throughout the whole nature.

COMBINATION OF EXPANSION AND ACCURACY.

When expansion and accuracy have become established in the being as dynamic habits, they come to react on each other in such ways as to produce

complete growth. Expansion cannot go on beyond a certain point without compelling accurate organization. On the other hand in order to be accurate, to get a correct explanation and use of details, we are compelled, as we have already tried to show, to search and discover new laws and more fundamental principles; thus expansion downward into the more abstract and fundamental is made necessary. If Lemonnier had had large expansion, it would have compelled accuracy in his observations of Uranus; if he had had an intense spirit of accuracy, it would have compelled expansion in the form of new discovery. Again, when accuracy would halt and become a mere pedantry of details, expansion lifts it up and makes it an accuracy of scope, of exact and broad perspective; it keeps the multipliers and propagation of every seeming trifle in view, and thus helps complete accuracy into thorough organization. Thus progressively and reciprocally developing each other, these two factors produce the other elements and characteristics which go to make up complete growth.

I. INDIVIDUALITY.

One of these characteristics is thoroughly-formed individuality. This is also, as we have said, one of the most difficult to create. Increasing complaint is made of the uniformity, identity even, that is creeping over the world. A province or a state is but its capital city spread out; France is but diluted Paris. Telegraphs, railroads and the

press are making all men more and more alike, and this too in an age when a more highly developed specialism is called for and is most profitable. But if the correct principles of growth are followed, the highest individuality will result. Let the peculiar powers of each personality be expanded to the utmost, let them be accurately wrought out to suit each other and all other realities, and an intense as well as most fruitful individuality will be developed. A notable instance is the chemist Scheele, the centennial anniversary of whose birth the scientific world recently celebrated. He had so little taste for language that though born in Swedish Pomerania and removing in early life to Sweden itself, he never learned to speak the Swedish language and barely knew enough of it to write his memoirs. Yet his highly developed powers of chemical investigation enabled him to make some fundamental discoveries in that science and lift him up a striking individuality in the pages of its history. The force of Sydney Smith's remark increases with every addition to the complexity of modern life. "Be what nature intended you to be and you will succeed. Be anything else and you will be ten thousand times worse than nothing." At a recent college commencement a returned graduate "who had for some years been struggling with the law and who had learned some hard facts," by experience and observation, suggested that a professor be added to the college faculty whose main business should be to associate as closely as possible with

the students, "become as intimately acquainted as possible with them and what latent talent" was in each individual? "and help guide them into that life calling into which nature intended them to go." The man who thoroughly possesses both accuracy in all its forms and expansion will grow out into that line of usefulness where "nature intended him to go." Accurate, expansive growth will give a powerful aggressive individuality.

II. INCLUSIVENESS.

Another characteristic of the highest growth is essential comprehensiveness or inclusiveness. It was recently said by a leading writer, that the great problem of modern life is elimination. Rather it is inclusiveness. The problem is to observe what few facts, experiences, acts include the many, and by acquiring and living the few to live a comprehensive life. Plato said he would follow about like a god the man who could show him unity in diversity. Expansiveness, completeness in all essentials, by living in the least concrete, this is the problem. Expansion and accuracy together solve it. They enable one to see many things, then the few inclusive ones, often the few which make the many into a single system. People are beginning to realize that the two halves of the famous dictum of Lord Brougham, that every person should try "to know something about everything and everything about something," are necessary to each other. The only way to know something about

everything, is by knowing everything about something, and vice versa. Individuality and comprehensiveness are thus brought together in the highest growth; specialism and essential completeness are obtained by the union of expansion and accuracy.

III. PRODUCTIVENESS.

One of the most valuable as well as most difficult to acquire of the qualities of the highest growth is the power of original production. A teacher has frequent occasion to notice the extreme rarity of independent producing power, of any strong tendency to mental fertility or productiveness even in minds gifted with considerable analytic power. Ruskin has said that not one person in a hundred thousand ever sees anything, and not one in a million ever has an idea. These, of course, are the words of a bitter moment, but there is a basis of truth to the statement. Every day a teacher notices that there are three classes of students: first, the many who can walk in a beaten track; second, the some, who when shown a distant goal display skill and often originality in attaining it, who can work a mine when it is shown them; third, the very few, who can for themselves discover new wealth and work it out. The lack of fecundity is certainly the most widespread of all mental defects. Have the correct growth processes, have expansion and accuracy any power to remedy this? Rightly used, it is plain that they have. Every mind is to a cer-

tain degree productive, and yet not one student in twenty, perhaps not one in fifty, has any systematic method of preserving and accumulating the products, whatever they be, of his mental activity. The old fashion of keeping diaries used to do this in a rough way, but that has passed away and has been replaced by no other general method. Yet what more important factor can there be in stimulating independent growth, than to make it a rule to observe any little germ of new truth that may appear in the flow of one's daily thought, to separate it from the surrounding worthless, that would smother it or hurry it away beyond recall, and to record it in a way best fitted for its after development? This is a use of expansion because it both leaves the mind free to go on and gives it an impulse to do so; it is an employment of accuracy by compelling the mind to put a vague idea into words, to give an indefinite fancy a local habitation and a name. It cannot be too often repeated that "writing maketh an exact man," but the right kind of writing also makes a broad man. Most beginners have little power to even recognize these vital germs when they appear in their own minds, and are surprised when it is pointed out that they have an idea. Often they record as useful ideas what they see a little later are of no value. But practice teaches increasing discrimination till, at last, the mind becomes thrillingly sensitive to the presence of each new idea, and it becomes an easy pleasure to at least gather day by day the seed from any lit-

tle flower or fruit that presents itself within one, to plant these and gather the results again. It is not surprising to find that most men who have attained a high degree of productiveness have kept a note-book, adapted to their needs and methods of work. To show how widely this is true it is but necessary to mention as examples such a variety of illustrious names as Hawthorne, Emerson, Macaulay, Locke, Newton, Clerk Maxwell. One of the most noteworthy instances is that of Motley, the historian. When a student at Harvard he neglected the curriculum work and was rusticated once or twice for this negligence, but his college course had one redeeming feature. In his desk he had a drawer, into which he threw records of ideas, snatches of poetry, and literary projects. His mind seemed to be ever fecundating some new literary enterprise, and the results he preserved, so that that drawer became the center of his educational life. It might have been worth a great deal more to him if, at the same time, he had done systematic college work. At all events its redeeming power in his intellectual life, the initial habit of expansion, the initial habit of exactness it produced, are worthy of careful attention.

Thus expansion and accuracy taken together and fully employed form a summation of growth. They correspond to the two great elements or chief divisions of the new education. Expansion is the preliminary or desultory course, accuracy is the second or thorough deductive course. They

are love and truth, the great outgoing force and the correcting, establishing force. The one gives largeness of scope, the other, fineness of detail. They give the highest fruitfulness and endurance to life.

MEANS OF ATTAINING TRUTH-ORGANIZATION.

How then is this second element of growth to be attained? Some methods have already been hinted at or described. Every branch of study, mathematics, language, science; the practical world, art, and literature, all indeed are full of means by which to cultivate this in the student. The appliances for attaining it are increasing everywhere. The world is not only demanding more and more accurate work in all lines of effort, it is also producing the means by which workers can attain this accuracy. Better microscopes and telescopes, all the improved methods and machinery with which each decade replaces those of the preceding, have reduced the exact determination of facts to a science. Century Dictionaries and Encyclopedia Brittannicas have reduced the swift verification of facts to a simple act. The amount of testing and exact measurement and recording that is being done is enormous. Increasing accuracy, searching concrete truthfulness is one of the most prominent characteristics of the age.

But the defect in the accuracy obtained by the means mainly in use in this age, is that it is too apt to become mere accuracy in details, and to make

mere precisionists who mistake their collection of needle points for the universe in orderly array. Accuracy loses more than half its value unless it be combined with an active expansive element, and thus become that accuracy on a large scale which gives a thorough appreciation of scope, perspective, general elements as well as details. Mere concrete preciseness of itself, too often, instead of uniting creatively with expansion, becomes final and self-satisfied. The minor and more palpable accuracies are likely to become primary in the attention and to drive out the major ones. Every agency that will remedy this is of the utmost value.

CONSCIENCE AND RELIGION AS ORGANIZERS.

If now we turn to the moral and religious element as a part of education, we find that rightly developed in the soul, it gives a deeper, intenser and more comprehensive spirit of accuracy than anything else. The spirit of accuracy is in its inmost nature the spirit of truthfulness; it is conscientiousness. In the very essence of religion lies a spirit of intense reverence for truth. A truly religious mind realizes that there is a moral worth in every fact, that every exact fact is a summation of all truth. It is men with this great reverence for truth that have been the organizers in the world's history, and have themselves become supremely organized. When falseness to any fact, carelessness even to any shade of reality, is realized as

impairing one's truth fiber, and therefore the integrity of the soul, and hence even the moral constitution of the universe, and when a distinct reverence for truth is thus established, the organization of the individual and his organizing power are assured. It will be much easier, nay in many cases he will feel it to be necessary to do all work, carefully and conscientiously, and the organizing results will appear. Lincoln never had any real school master beside his own love of truth, but this taught him how to write his Gettsyburg speech and his second inaugural. Conscience is the greatest of all organizers.

This religious love of truth not only gives accuracy in the swiftest and most fundamental way, it also gives the broadest and most elevating accuracy. It lifts exactness above the mere preciseness of the pedant; it gives an order, a range, a perspective to this power. It shows that each correct detail is not only valuable in itself in the immediate area of its concrete application, but that it also has an immensely greater moral multiplier in its effect on the soul and the world life in general. It shows that beside accuracy in detail there are forms of mass accuracy like the true apprehension of the needs and resources of the world. It thus comes to have an expansive effect over this part of growth. All facts are humanized and spiritualized. The truth-organization given by the religious spirit, thus spreads throughout the being with general power.

The religious spirit aids the truth-organization of

the being in another way, by urging it in all parts of the nature in order that the religious spirit itself may be made more effective. The altruistic spirit, the religious spirit cannot go far without perceiving that its own usefulness is vastly increased by the accuracy of its knowledge and action. The spirit of love cannot attain its maximum efficiency without wisdom of mind. Mere love of her child will not enable the mother to prescribe aright for its diseases. The undisciplined generosity of Timon of Athens did more harm than good. Many an altruism has been disappointed and shocked back into selfishness because it went to work in vague, uncalculating fashion. Love, however, in many cases finding its work unfruitful or inadequately productive, proceeds to learn, to test, to measure and thus to make itself fruitful to the highest possible degree. The mother that loves her child often studies all of medicine that pertains to the affliction of the child, that she may the better watch the fluctuations of disease and alleviate pain. More than one father, loving his son, has learned mathematics and Latin that he might prepare that son for college.

Everywhere the best conscience and the best love thus search out and master truth, and thus themselves become supreme organizing agents. Men may have been accurate and disciplined without the aid of them. But their accuracy and organization would have been gained more easily, and would have been of a higher order, if attained by their use. That system of education is imperfect which does not avail itself of them.

CHAPTER V.

THE WILL.

THIRD ELEMENT IN GROWTH.

THE great Italian astronomer, Schiaparelli, who discovered the canals on the planet Mars and many other interesting details of its surface never before seen, says of himself, "it was only after fourteen years of work in observing Mars that I saw the details of the image with any clearness, and after that further details appeared." This illustrates a third element in growth, namely, the use of the will. Schiaparelli had that expansion of mind which made him ready to perceive anything new in his observations, he had that spirit of accuracy which enabled him to test all glimpses and suggestions, reject all illusions, and establish the fruits of his work on a scientific basis for the world and as organic powers in himself, but beyond these he had the will which drove him on through fourteen fruitless years to perfect the growth within him and make it productive to the world. Growth as a process is made up of expansion and organization, but it needs a generating, sustaining force to carry it on. The will is this vital, energizing power.

I. THE WILL A FACTOR IN EXPANSION.

Expansion is, in itself, usually pleasant. It brings

its own impetus of exhilaration, yet even in expansion the mind often comes to places where the use of the will is necessary to further progress, where there must be for long periods of time intense and repeated efforts, till openings for exact and desired expansions appear. The seed corn has been planted. A dash of rain comes, and then a hot sun, and as a result the surface of the clayey soil is baked into a hard crust. The seed corn sprouts but the tender shoot cannot force its way up through the crust above. Then comes the era of effort. The tender growth pushes its way along under the crust for a distance of more than a foot often, till it comes to some crack or yielding spot. Through this it arises, pale as if with long effort and completes its life. In the same way come eras in human life when expansion is bought only with supreme effort. Edison tells us that, in inventing his electric light he formed no less than three thousand[1] distinct theories and plans, all of which seemed perfectly plausible before they were tried, yet only two of which succeeded. Having obtained the right plan, it was easy for him to expand it over the world. Many a mind struggles by sheer force of will for long years to get a satisfactory faith by which to live, or line of growth which to fill in in after life. Often also when a season of expansion comes it is only by an effort of the will that it is carried to its full development. When the mind becomes satiated, frequently the will alone can carry the soul on to the utmost use of the period of inspir-

ation. Again a supreme use of will power is many times needed in that kind of growth expansion, which is more or less external to us; when having made ourselves equal to the best we know, we try to cause the world about us to grow to the same point. We strive to extend our growth out through the world about us and make it homogeneous in some respect with us. In this process our growth often clashes with other growths, or blindnesses, or opposing wills, and all our self-assertive power is necessary to make our self-extension power effective. Thus expansion, pleasant as it usually is, has in many places vital need of a robust will to aid it.

II. FACTOR IN ORGANIZATION.

The will has a more important function still in that second part of growth which we have called organization. Self discipline except to the very few is unpleasant and the will must be an omnipresent factor in it. To test and re-test; to devise and apply varied new tests; to teach all the powers to converge and exactly meet any need or opportunity that arises; to teach them so often and so well that in time they learn to do so instinctively, this is a spontaneous and exhilarating process to but few. When Newton sat by a pendulum day after day, and placed various substances as mercury, wood, iron, in turn in its hollow bob and set it in motion and patiently noted the results and thus determined the precise nature of the law of gravitation, his mind must have been in a very different

frame from what it was in when vastly dreaming about universal forces. A French scientist took the pieces of a single fossil, more than two hundred and fifty in number and spent three years in chipping out each piece free from the solid encompassing stone and putting them together; how much more will-power was here required than that which Agassiz needed to employ when thinking of glacial epochs and vast ice-sheets stretching from the pole to the Carolinas. Herschel grinding and polishing a single telescope mirror for seventeen continuous hours, while his sister read to him or placed pieces of food in his mouth, was in a frame of mind requiring far greater exercise of will, than Herschel sweeping the heavens and expanding his soul with the sight of multitudes of suns or of a new planet swimming into his ken. Demosthenes drilling every unpleasant intonation out of the voice, every ungracefulness out of the body, was in a very different frame of mind from Demosthenes swaying an Athenian audience up into a loftier patriotism. In the one case will predominates, in the other a spontaneous exhilaration carries the soul onward.

In fact it is observable that in almost every great growth, in every education that spreads beyond narrow bounds or rises above mechanical habits, there is an era of intense effort. There is almost always at least one season of wavering and gathering of all the forces of the soul. It came to Sir Walter Scott when in mid-life he found himself

bankrupt with enormous liabilities, and he resolutely set himself to write his way out and produced his masterpiece Ivanhoe while sick in bed. It came to Thomas Carlyle when the manuscript of his masterpiece, his work on the French Revolution, had been reduced to ashes by the mistake of a servant girl. It came to the great mathematician, Euler, when he lost first the sight of one eye, then that of the other, and again when his library and all his papers were burned; man's power over it is shown in the list of his original memoirs covering fifty-one pages, and in the picture which we have of him at seventy-six, stone blind and near to death, yet busy in the labor of revising all his works. It must be more or less constantly present with men like Prof. Sayce, who though a victim of consumption and possessing scarcely one lung, yet toils on and keeps himself in the front rank of the world's Oriental scholars. It came in supreme degree to St. Augustine and Luther, Bunyan and Wesley, and was supremely triumphed over by them. Three of the most noted French men of letters of to-day are Alexandre Dumas, fils, Alphonse Daudet, and Sardou. Paris is perhaps the most enlightened center of belles-lettres in the world; here, it would be supposed, merit would receive its swiftest recognition. Yet Dumas, with all the prestige of his father's name to aid him, was brought by repeated failure to the verge of suicide before he won a name and place for himself; Daudet and Sardou for years lived in garrets

and earned the barest subsistence by giving lessons or by hack work before fame came to them. Thus in the very focus of the world's civilization, among the versatile and receptive French people, to those in higher and lower circles alike, merit still can triumph only by some use of the will.

THE WILL IN THE FUTURE.

As the world goes forward there is, in some respects, an ever greater need of the development and use of both an intenser will power and one of a higher type. There is a constantly increasing need of will power in order to preserve one's individuality. The more complex and strenuous modern life becomes, the more numerous and intense become the influences which tend to break down the personal will. All the modern world is full of attempts at absorption, demands for uniformity and conformity. Never before, therefore, was there such need for the possession and exercise of that self-energy which makes each individual a distinct factor in the world life.

Never were there also such vast interests and organizations to be controlled by individuals into their highest fruitfulness. Every new element and area added to life calls for a new great will to manage and develop it. Every new concentration of force demands an even greater increase of will power in the world not merely to prevent the new power from running riot, but also to compel it to combine in full productiveness with all other forces

in the world. Again and again crises come and supreme influences appear and no leaders arise with wills robust enough to master and utilize them. Parnell dies and there is no leader to take his place. Thiers, Cavour, Lincoln pass away, and they have no immediate successor. Men of intelligence and at the same time of leonine will, like Gladstone and Bismarck, are the exception.

The more complex and full of shifting intensities modern life becomes, the more complexly and delicately organized must be the will of the individual. It must be able to act now positively with great strenuousness, and now to yield in perfect obedience. It must be able to concentrate, to borrow from distant regions of the being and from the past and future, and to make all converge on a present point. It must have the power while yielding completely in one part of the nature, to persist and act with the greatest intensity in other parts. In a word it must be, as we have said, most complexly and delicately organized.

Thus on every hand it appears that modern life needs not less development of the will of the individual, but more. It needs that the will be more thoroughly developed through every area of the being. Even when there is spontaneous growth, an element of effort will add something to it. Unless the individual add this, he is not living up to his full privilege; only thus can life get its full intensity and momentum.

EDUCATION OF THE WILL.

The importance of the will-life, both in the process of training and in the after application of its results, is yearly more clearly understood by educators. More and more is self-activity required of the student in all kinds of work. It is insisted that the teacher shall do nothing for the young mind which it can do for itself. The child must be left to do all if possible; if it cannot do all, then the smallest possible hint is given; as a last resort but before the child's will shall have broken down in discouragement, a full explanation is to be given. The child is to be taught to perceive for itself, discriminate for itself, judge for itself, initiate little enterprises for itself, sustain and press them forward to a successful issue by itself. Thus it is the aim to develop the will into firm but sensitive action in every area of the being. At the same time, in all the elements of life, the will is to be trained to obedience; it is to be wrought into effective harmony with the general structure of society.

Educators have thus studied the training of the will beginning with the earliest infancy and extending the process to the maturest methods of original discovery. Outside the schools certain informal educative influences also aid effectively in this culture. Among these are the privileges and duties which come with self-government. Liberty means self-activity. As the result of so much personal initiative permitted and encouraged, American business life is permeated with qualities of energy

and pluck which communicate themselves to all who vitally come in contact with it. This is illustrated by the rule which Chauncey M. Depew urges as vital to success, that the individual must learn, after entering into a plan or project never to give it up till it has been made either a plain success or a plain failure. This may almost be taken as an American maxim. On the other hand the same self-activity has stirred the higher life of the people. In fact in every sort of work opportunities occur daily by which to exercise and develop this persistent energetic faculty. This is well illustrated by the striking bit of advice given by Austin Phelps to young preachers.[2] "Make it an invariable rule not to give up a subject of a sermon on which you have begun to write. A vast amount of waste of clerical effort is caused by succumbing to discouraged effort. The wasted introductions of sermons are 'an exceeding great multitude.' When indicative of a habit they signify mental debility. Finish, therefore, everything you undertake, for the sake of the mental discipline of success. Make something of the refractory theme and the barren text. . . . . You will often flounder through the sermon, not much wiser at the end than at the beginning, and hardly knowing how you got through. You will be sometimes reminded of Aaron's luckless attempt at statuary. . . . Perhaps you will dash it in pieces; but go through the process of making it a likeness of some living thing in the heavens, or the earth, or under the

earth. You will be the stronger in will-power over difficult themes, if nothing else."

RELATION OF WILL TO RELIGION.

But as in the other elements of growth, so here in the culture of the will, religious development has an important, and, if the highest results are desired, an indispensable function. Will born of religious faith is supreme. In deeply religious souls are witnessed intense displays of will power, whether in aggressive or resistent action, superior to those found anywhere else. All the great races of the earth have had powerful volitions as an element of their greatness. The Assyrian, Egyptian, Greek, German, English, French, American races all possess or have possessed it in some form, but of all races the Roman has manifested the most intense and effective will power. From Horatius to Cæsar, and from Cæsar to Rienzi, where do we find a like splendid line of imperial-minded men, grasping the earth and for long centuries controlling it into order? But the will that was in Paul and in the Christian converts was superior to the will in these men. Christianity subdued the Roman Empire. The will of the martyr was superior to the will of the patriot, the will of the missionary dominated that of the centurion and pro-consul. Nor is the reason difficult to see. Religion gives the soul a grasp of the universal and immutable. It feeds the will on omnipotence. When such will is really possessed, it is irresistible.

But while religious culture is intimately associated with and can be made effective in developing simple, strenuous will force, it has an even more important function in developing that complex and sensitive will demanded by modern life. Valuable as are the secular means of cultivating will power, which we have mentioned, they alone are likely to make the faculty narrow and self-aggrandizing. A certain moral and religious element is essential in the highest and most complete culture of this faculty. The form of will most difficult to acquire and most emphatically demanded by modern life is that in which obedience and imperial qualities are organized in fruitful harmony. In the development of this complex, sensitive will the most difficult quality to attain is the right kind of obedience. This obedience must be absolute but not servile. It must be unquestioning but must leave the faculties cheerful, active, even aggressive. In cultivating this kind of obedience, the power of religion is unique. The first sin was disobedience, and the first quality which religion aims to thoroughly develop is obedience, but an obedience which is productive rather than stifling. Nowhere do we find so much obedience and so little law as among religious organizations. It gives a broad view, a comprehensive altruism, so that the developing will does not clash with others but rather aims to develop them into a harmonious self-activity in conjunction with itself. It creates a will both robust

in direct action, and sensitively obedient to proper influences.

Not only can religion thus be made to tell in the development of the will; it also for its own sake urges the highest and most finished culture of this vital faculty. In almost all great growths we have seen that there are eras of depression and profound wavering. Nowhere are these so profound and vital as in religious experience as is shown in the cases of such men as Bunyan and Luther. As some one has said, the only real trouble is religious trouble. Every form of energy that can sustain and carry forward the soul at such seasons is demanded. Religion here for its own sake urges the attainment of the utmost will power as well as other spiritual forces. This is true in the earlier as well as the later stages of religious development. Faith has an element of volition. True religion in all its parts calls for the highest development of that faculty of action and persistence which has done so much to save the world in the past, and is to do so much more in the future. It demands the highest culture of the robust and assertive as well as the obedient faculties of the soul in all its areas.

Mr. Gladstone says,[3] "the Christian idea, taking possession of man at the center and summit of his being, could not leave the rest of it a desert, but evidently contemplated its perfection in all its parts. I appeal to those great and comprehensive words of Saint Paul, which may have been a prophecy not less than a precept, and which enjoin

us to lay hold on 'whatsoever things are true, whatsoever things are honest, whatsoever things are just, whatsoever things are pure, whatsoever things are lovely, whatsoever things are of good report.' It is here conveyed to us that in the Christian religion there lay, from the very first, the certain seed of all human culture."

THE TRINITY OF GROWTH.

We find then that there exists a certain trinity of growth. In soul development there are an element of expansion, an element of exactness and organization, an element of will. These correspond to the three elements in the new education, the desultory course, the scientific-deductive course, and self-activity. In the attainment of all of them, religious and moral development are deeply related and may be made to play a supreme role. Standing at the foot of Wesley Lake, where Asbury Park and Ocean Grove meet the great ocean, and looking lakeward, one sees many small boats moving aimlessly about over its surface in short courses. Some years ago two small ferryboats also moved back and forth from shore to shore, one of them clinging to a chain along which it was propelled by a crank arrangement. Turning about and looking out over the ocean, one sees great ships, moving swiftly along in direct courses, visiting the ends of the earth, guided by the stars of heaven. The first picture of those little boats in the lake, is a picture of the undeveloped life moving aimlessly

between narrow limits or clinging to the chain of daily routine. The second is a picture of the developed life; it swings round the world, it is guided by accurate and lofty ideals, it is driven by mighty inner engines. Expansion and accuracy and self-activity, in part, at least, heaven-derived, can make lake-dwellers into ocean voyagers.

CHAPTER VI.

A NEW BODY.

THE CHANGED IDEAL.

IT is too often assumed that the ideal physique does not change from age to age. Most people take it for granted that the body admired and sought after by the athlete in the Olympian games and by the knight in the mediæval tournament, is to be desired and cultivated to-day. The truth is that the desirable body changes with the privileges and necessities of each stage of human development. It is a variable not a constant. Hercules had the ideal physique of his age because man's surroundings in that day were what they were, forests, wild beasts, no weapon more refined than a club. Richard the Lion Heart, had the ideal body of his day, because the work to be done then was what it was; the data of his age were chivalry, armor, walls, battle-axes, superstition, tyranny. But neither of these men had the ideal physique for the present day, so radically have the conditions of life changed. Muscular development and physical development are no longer interchangeable terms. Mere muscular development no longer adds particularly to a man's privileges or efficiency. Samson could not now be a hero by

virtue of mere physical strength. When a modern Parliament House is to be destroyed dynamite is used; the man is not called for who is strong enough to pull down supporting columns, but the man who is active enough to get safely away after depositing the explosive. Of what use would Hercules be in these times? We kill our Nemean lions with bullets. If living now, he might be on exhibition in a museum, or at best he would be an unusually efficient member of the police force, used to keep pugilists from beating inoffensive men. On the other hand, if Sullivan had lived three thousand years ago, his name might now be coupled with those of Hector and Achilles as heroes of the Trojan war. Wm. B. Curtis could lift over a ton, and Dr. Winship lifted thirty-three hundred pounds, but neither of them did the world any great service. Our hydraulic engines lifting a cupola, containing one hundred tons of molten steel as a man lifts a cup of coffee, makes such men mere curiosities. A pugilist in training can hit a blow of over one hundred pounds with his fist. But all such blows have been superseded by modern artillery, sending projectiles through eighteen inches of steel plate armor. What is needed in physical development now, is not the arm of a Sullivan, but the hand of a Rubenstein.

NERVE, BRAIN AND ACTIVITY.

In fact, extreme muscular development in this age is often an encumbrance rather than an aid.

The energy of the system is exhausted in sustaining it. The lungs and heart especially are overtaxed. They must send so much blood to the muscles that they can send but little to the brain, and if required to send more, they often break down. Knotted and hardened muscles also hinder the circulation and hence the secretion of waste products, which latter are now known to be the main cause of distress in weariness. One of the most trying positions in public life is that of Secretary of the Treasury in the cabinet of the President of the United States. Observe some of the men who have served in this position; how different their physiques, how different their powers of work. Secretary Sherman was lean, hard and flinty in bodily constitution, and he came out of office stronger for his four years of work. Secretaries Manning and Windom were muscular and massive, and both were smitten down in death after a few months of onerous labor. Contrast Jay Gould and William H. Vanderbilt. Jay Gould was small; he had a body which was little more than a brain feeder. He had not much muscle, but he had a system of nerves and blood vessels which enabled him to do a vast amount of brain work. When engaged in intense thought, the veins on his forehead would so swell, that observers say the very skull seemed to distend with the volume of blood that was passing through his brain. Mr. Vanderbilt was large and muscular. His body would have made two Gould bodies. But

it was not a good brain feeder. One of the arteries of this organ burst when his mind was severely taxed and his career ended. The time was when a body so solid and substantial that it seemed a part of the fundamental framework of things was the ideal physique. Now the ideal is a body which seems a part of the active, energetic essence of things, vibrating, thrilling, and yet enduring.

Every decade the demand becomes more explicit for a body that is the best possible brain and nerve feeder and tool manipulator. Every day physical labor becomes more and more a pressure of levers and buttons and less a matter of dead lift and carry. Man is becoming less a direct physical worker himself, and more a manager of work. Almost all work is done by machines or tools. The lever is the scepter of the age. We plant and reap by pressing levers, we write and make music and telegraph thus, we ride cars governed by levers, war is reduced to a matter of getting from one place to another and pressing levers. If levers are superseded it will be by the simpler pressure of a button to make electrical connections; the simple lever actions of the arm and hand will be replaced by those in the finger. All parts of the great Yerkes Observatory of the University of Chicago are to be manipulated, the floor elevated and depressed, the dome revolved, by the pressure of buttons; in it we have an illustration of what may come to be the general method of operating the material life of the world. To do this work in the

most effective way, a body is wanted not large, but well knit, active and recuperative. The age calls for a body that will endure long and repair rapidly. Every labor saving machine makes a demand for more nerve, less muscle, more activity, less weight.

Not only does the change in the character of manual labor, place before us a new ideal physique, the enormous increase in high culture privileges also make a like change in the physical ideal. The vast increase in human knowledge, the accumulations of art and wisdom, which are to be assimilated and made a personal possession; the vast material civilization which is to be controlled into the highest fruitfulness for the benefit of all; all these require a vast expenditure of brain and nervous energy and demand that the body be the best possible brain and nerve feeder. New arts and sciences rain down from the sky so fast, that the imperfectly developed man may be said to be kept busy dodging them to save himself from destruction. Only the properly organized man can master so much of the essence of all as to make himself effective in the highest way. The camera and printing press send us new privileges from all over the world. Steamships transport to us with daily accuracy the privileges and wealths created by a million trained workers. Railroads pour them out before us in easy profusion. Telegraphs and telephones hurry them to us with electric speed. In the eagerness to enjoy all and

be an effective part in all, what wonder that many break down! Insomnia and nervous prostration, neurasthenia and hosts of new nervous and cerebral diseases with strange, ominous names appear. Men so widely separated in fields of work as Ruskin and Huxley, Phillips Brooks and Herbert Spencer alike fall as if smitten by an invisible hand.

At first sight man is dismayed by the immensity of his privileges and the consequences of trying to enter into them all, and he is disposed to think that the choice is put before him of the suicide of overwork, or the virtual suicide of inaction, or at least the partial suicide of a limited life. But what is really needed is a new view of the physical ideal, and an adjustment to new conditions by making the body a better brain and nerve feeder. There have been great advances in the past in this respect. The latest evidence goes to show that the prevalent opinion that peoples living a primitive life are free from brain and nervous diseases, and that these are characteristic only of modern life with its rushing momentums and whistling velocities and general overwork, is erroneous. "Travelers who give the soundest information on the subject," says Dr. D. G. Brinton in Science[1] "report that in uncultivated nations, violent and epidemic nervous seizures are very common. . . . An unexpected blow on the outside of a tent throws its occupants into spasms. The early Jesuit missionaries paint extraordinary pictures of epidemic nervous maladies among the

Iroquois and Hurons. During the middle ages there were scenes of this sort which are impossible to-day." The law seems to be that "sudden change in the social habits and condition of any race, at any stage of advancement, will result in a prompt development of neurotic disease." "In the District of Columbia, for example, the decedents among the colored people from nervous diseases often exceed those of the white population by thirty-three per cent." Since the days when wounded Greeks wept and screamed, the increase in human nerve force has been marked. With increasing need, increasing strength of this kind has been acquired. Modern life calls not for inaction but for the careful cultivation of the additional nerve and brain power needed. It proclaims that the ideal physique is the best brain and nerve feeder. The physical ideal has changed and, in the future, this ideal will gain an ever greater refinement.

I. PHYSICAL EXPANSION.

Of the ideal physique demanded by the new life of the world, certain particular features are clear. The first is a due expansion of parts of the body. In physical, as well as in all other growth, expansion is first. Of fundamental importance is the development of the chest and the organs which it contains. The chest is the home of the heart and lungs, the great organs of vitality and those perhaps most likely to suffer from over-exertion. As is well known, in early life the breastbone or ster-

num, which joins the upper ribs together is gristly and more or less pliable. Before the age of thirty, it hardens and can no longer be stretched. The first part of physical expansion is rounding out the chest while this is still possible.

What does a depressed flat chest mean? It means that the lungs and heart have a dungeon to work and grow in. It means that the heart is cramped and is perhaps not suffered to grow to its natural size. With many struggles and flutterings it can send but a feeble stream of blood through the body. It means that the lungs are compressed, weak, and may shrivel up or decay. At best they can but imperfectly do their part in making the body a rich brain and nerve feeder and active implement manipulator. The fresh air cannot be made to penetrate by them to the marrow of the man. But little of it reaches the feebly circulating blood which soon degenerates into a stale, half-stagnant fluid. The flesh becomes musty and the system congested, till at last nature comes down upon the man in that tremendous house cleaning fury which we call a fever, and either drives out the accumulated impurities or kills him if the body be not worth the cleaning. In every school there should be a physiological museum, and the first place in each museum should be occupied by a pair of lungs permanently indented by the inpressing ribs as is sometimes found to be the case in post-mortem examinations.

What does a fully expanded and developed chest

mean? It means that the lungs and heart have a palace to grow and work in. Big lungs draw in large drafts of fresh air into which the blood, tired and full of waste from its long journey through the body, plunges with ease and gladness, and thence bounds out, rosy with abundant cleanness, to run another journey swift and rejoicing. It means that the heart can develop its valves and muscles till, like a noble engine, it drives the vital fluid to the remotest fiber of the body in any needed abundance, when emergencies seek to crush or opportunities must be used swiftly and to the utmost. An addition of three inches in the perimeter of the chest gives an increase of fifty cubic inches in lung capacity. This addition is often of fundamental importance. Some one has said that a forty inch chest is a better start in life than ten thousand dollars. At least we can say, with the chest fully enlarged and its organs developed, let pleurisy, pneumonia or ghostly consumption come, they will find a well ribbed and rounded bosom which, in all ordinary cases, will be to them a flinty and impregnable fortress. Let opportunities for an ever larger and more effective life come, streams of vitality will flow out upon them, adequate to their full mastery and utilization.

Not only does the chest structure solidify early in life, the same is true of other parts of body. The nerves and nerve centers for example, take on a more or less fixed character before the age of twenty-five. The nerve centers stiffen, become

stubborn and intractable and any great loosening and development of them must take place earlier. One of the discoveries of the last fifty years is that impulses travel along the nerves at a perfectly measurable and surprisingly low rate of from one hundred to one hundred and twenty-five feet a second, or about as fast as a greyhound runs. Perceptions of the outside world, sensations of pain, and commands from the brain to the muscles move along the nerves at this rate. But the rate varies in different persons, and can be increased in early life. So also the nerve centers while immature can be made mobile, and can extend their powers of instinctive action. It is also important that the blood vessels of the body, the veins and arteries, should be enlarged to their full power of action. That expansion and strengthening of them which will enable the energies of the body to gather together with a kind of ample ease, and to flow readily to or from any given part of it, are demanded. The first part of the physical culture needed in this new life of the world is thus to fully enlarge these and all other organs; in a word, everywhere to lay broad foundations and to build an ample framework of vitality.

II. PHYSICAL ORGANIZATION.

As in growth in general so in physical development, after needed enlargement and often along with it, comes a proper, thorough organization. All the parts and organs of the body need to be co-

ordinated and made fruitfully interactive in the highest degree. The body is to be made ready so that any combination or succession of physical acts which events may call for, will be performed instinctively and with the utmost economy. The nerves are to be trained to measure accurately, and hence the nerve centers and the whole structure to act harmoniously. The body must be made a unit.

The awkward man is made up of separate parts; he is, in American phrase, numerous. His parts are ever quarreling. The head hates the neck, his two legs are deadly enemies, there is civil war between his arms, his feet are perpetually trying to secede from the body, there is a feud in every joint, his fibers are saturated with domestic strife. This outward awkwardness is but a visible picture of the even more wasteful internal lack of harmony and adaptation. It all means waste of energy, loss of time, diminished life. But the graceful man is now here, now there, and he is all together. However he moves, he can keep all of himself in any given part of himself. This is true not only of the superficial and more massive parts of the body, all elements and fibers also, the cells and vessels of a hidden organ, can be taught to act gracefully together and with intense effectiveness.

The right kind of physical culture should develop a little brain in every nerve center and finger tip; intelligence, memory, accurate powers of perception, should be wrought through every organ and fiber and established as permanent local structure.

Thus there will be no waste of action, but rather every energy expended will go out with fruitful power, multiplying its effectiveness in many directions. The physical being will act in steady and swift co-rhythm with the best of all that is in the universe.

III. THE PHYSICAL WILL.

As in general growth, so in physical development, the third element is the culture of the will. In the physical realm the will should have the same training as in other parts of the being. The body must be made to act and obey with a kind of will of its own. When dangers or opportunities come, the energies of the body should rise into action of themselves. The whole physical being should be instinct with a kind of celerity of obedience and self-action. The rushing momentums, the stresses and velocities of the age demand it. Each nerve should learn to decide something for itself, and to act without referring the matter to the higher organism. Thus both the general will for action, obedience and control is to be made stronger, and also little wills are to be created in every center, and almost we might say in every fiber, which will know when and how to act and when to obey.

Particularly does this age demand the utmost development of that will power which enables one to rest at a desired time, and to recuperate and store up large reserves to be used as opportunity may make profitable. Never was it so useful as

now, to be able to throw at will the life of many days into one, and to be comparatively lifeless for days after. Opportunities and inspirations come to every man. Well for him and for the world if he have the power when they come to use them to the utmost, if he have the power to call up years of slow preparation and storage, and borrow also from the future, and make all converge on the present.

It is the Victor Hugo who can write his best play in nine days; it is the Hawthorne, who can compose his matchless prose for twenty-five hours without stop or harm; it is the clergyman whose eye grows not less bright and cheek not less ruddy during a three months revival; it is the lawyer who for a week expends three times as much energy as his system produces to win the case that helps on right and makes him famous, it is these men who have power to smite the world onward. The King of to-day has the halo of established health about his brow. He has the standing reserve of health, to thrust aside little shocks, chills, inroads, insidious approaches of a thousand diseases, and at the same time to rush out with utter abandon upon any opportunity of supreme potentiality.

There is a little air-breathing insect[2] compelled by its enemies to live most of the time under water. When it is safe to do so, it rises to the surface and rapidly aerates its blood and then proceeds to store up oxygen in the body. It can store up enough to supply it for two days, so that during this long

time it can pursue its life beneath the surface without the necessity of rising and breathing. By proper will cultivation, man can greatly increase his power to store up reserves in his body. It is said that De Lesseps, the builder of the Suez canal, could sleep as much as eighteen or twenty hours a day for several days in succession, and then go almost without sleep for a week. The philosopher Kant, after a whole day of intense, abstract thinking, could, by an exercise of his will, in a few minutes break up every line of thought, and then lie down to rest in dreamless, unbroken sleep. It is men who thus at will can break up and decompose consciousness, who can make all an unorganized mist before the mind, who can change brain life into nerve or sense life, or unconscious physical, food and storage life, and who can do this for long periods if desirable, it is these that have the best basis for growth and for growth-causing power.

A counterpart to those forms of will which enable one to live and act with great intensity at times and to live as little as possible at others, is that form which teaches the accurate and moderate use of the powers. It makes easy the physical use of that exactness which knowledge gives. It controls mere physical impulse, appetite in all its forms. It helps one to observe in practice at all times the difference between what we may term (using the words in a popular rather than in a scientific sense) a stress and a strain.

If a piece of india rubber be stretched slightly,

when freed it will return to its original length. This kind of pull may be called a stress. If it be stretched very hard, when freed it will not return altogether, but will remain permanently lengthened. That is a strain. Bend a stick lightly and it will fly back; bend it violently and it will break or remain bent. The first bending is a stress, the second is a strain.

Proper exercise consists mainly of stresses. Strains produce damaging breaks and lesions, stresses beget growth, development. By subjecting one's self to mild stresses, one becomes able to endure what originally would have been a strain. Early should each one get both the knowledge and the will which will prevent him from entering fierce competitive contests beyond his strength, and likely to result in permanent injury to some part of the physical mechanism. In each physiological museum should be placed a picture or a model of a heart with a valve torn out, as an English physician found to be the case in the body of a man who had strained himself to death, and of a pair of lungs engorged with blood, like Renforth's, England's greatest oarsman, who fell over dead in his boat in the middle of a race. But particularly should the youthful will be educated to the thorough control of physical impulses. Mere uncontrolled appetite is still the world's greatest, most comprehensive curse. It rots the walls of blood vessels, enfeebles the heart, saps the vital strength, breaks life down into ineffectiveness. It makes the gain of civiliza-

tion the merest fraction from century to century. If, by any means, the young will can be taught to first master the simpler and more controllable appetites and thence proceed systematically to the control of the more complex and intense ones, and if this can be accomplished in any widespread way, the gain to the world will be beyond definite measurement.

I. THE SWEDISH SYSTEM.

The cultivation of the body to its highest efficiency in this age, therefore, includes a due expansion of certain of its parts, a thorough co-ordination of its organs and elements, and a careful cultivation of the physical will. If we turn to the methods of physical culture in use, we observe a growing realization of the nature of the new physical ideal. Each of the better systems of physical training now used, has at least some one of the features of the new ideal definitely in view.

One of the most prominent of the new methods is known as the Swedish system.[3] Originating in Sweden, it is in general use there. Introduced into this country, it has met with great favor, having been adopted in the Boston Public Schools and in many leading institutions. One of its most prominent exponents says "the Swedish system disapproves of and discards all movements which compress the chest (such as Indian club swinging) or which in any way interfere with free respiration, and the greatest attention is given to the proper

development of the chest. In recognition of the fact that to be truly strong, a man must know how to breathe well," much prominence has been given to "respiratory exercises." Also, "in judging of the effects of an exercise, we think the least of the muscular development produced." "We think all the more of the effects produced on nerves, vessels, etc., for the results in this direction can be vastly changed by varying the movements (as demonstrated in Medical Gymnastics)." Again, "measuring a man's strength, we compare the man to himself; we do not say that a man is strong because he can hold so much air, or because he can lift so many pounds, or because he can jump so high. But when he possesses a healthy, well-balanced, and well-proportioned body, which his will has under good control, then he possesses physical culture, even though in the eyes of some he may seem weak as compared to others."

When we now come to examine particular exercises, we find for example "arch flexions" insisted on as soon as the pupil is prepared for them; these consist of backward flexions of the trunk; they have the effect of straightening the back, of vaulting the chest forward by drawing the lower ribs apart, and of cultivating the extensibility of the upper region of the abdomen. In like manner, "lateral trunk movements," and abdominal exercises further expand and develop the great trunk cavity in which the vital organs live and work. In order more thoroughly to cultivate concentra-

tion of the attention and intensity of will, the exercises are conducted entirely by word of command. The teacher does not go through the exercise, the scholar imitating him, nor is a certain routine followed by memory. The pupil is taught instantly to respond to some unexpected word of command. The use of music even is not allowed, to help carry the student forward by its rhythm.

Here is a system which aims to give a physical development definitely adapted to the age. It puts expansion, cultivation of the vital organs, nerves, blood-vessels, first and before muscular development; it makes prominent the culture of the will. It has its faults perhaps; it may be for instance that the attention and the will are put to too severe a strain; nevertheless the system contains many elements of the utmost importance.

Closely connected with the Swedish system of physical culture, is the Swedish system of manual training, which is being rapidly incorporated into the school of our cities. The purpose of manual training is not only to give knowledge and abilities which will be of much practical value in themselves, but also to give a high type of physical culture. While making the body directly a tool manipulator, it is also found to make it a better brain and nerve feeder. M. Salicis,[4] founder of the Ecole Tournefort at Paris, says of the use of it, "Children thrive notwithstanding their attendance in school is longer by two hours than regulations provide." Sir Philip Magnus, who

made an examination of schools on the continent, says, "I was much struck with the superior physique of boys engaged in workshops over those occupied the whole day in sedentary pursuits." A constructive element in physical culture seems to give a stimulus toward and a swifter attainment of the new physical ideal.

II. GERMAN AND ENGLISH SYSTEMS.

The German system of gymnastics and the English system of out-door sports also both have features the use of which is important in this attainment. The Swedish system develops the individual will, the German develops the associate will. In the German turn verein, great stress is laid on combination, complex class drills. Children are taken while still young and trained in classes. Wills are taught to interact harmoniously to a given end. The English system develops the spontaneous will. In out-door sports, the will of each player is taught to respond not so much to the will of another, as in the Swedish system, as to the needs of a situation. The power of swiftly grasping a crisis and taking a sudden and firm initiative is cultivated. Thus the well developed German system is an expressive reflex of that great system of national development, by which the wills of the German people have been united into one dynamic, national or race will. The English system is in like manner indicative of national characteristics. The Englishman takes delight in watching a game of

cricket, because it is a vivid exhibition of those practical qualities of presence of mind, stubborn defence, and aggressive action which have carried English greatness over the world. The Germans point with pride to their armies marching as a unit on Sedan in a single night, and crushing Louis Napoleon. The English point with like pride to Gladstone bowling and batting the cricket ball on the common at Eton, and thus gaining that vigor which enables him to-day to bowl along the larger sphere, the earth, toward progress; they point to him at sixty-eight hewing down trees by the hour in his park and thus gaining that activity and aggressive power which enabled him to hew down a whole wilderness of Irish abuses. The English and American system of out-door sports, beside the valuable cultivation of a characteristic will, also give a fineness and sweetness of vigor, not bestowed by indoor gymnastic work. Actual fiber gained indoors seems often artificial, heavy, stale. But fiber gained on the turf and in the sunshine is elastic and sweet. It is full of sunshine, of the green vigor of the turf, and the blue serenity of the sky. Hence the English system properly regulated supplies essential elements, not afforded elsewhere, in obtaining the most effective physique.

III. OTHER ELEMENTS OF PHYSICAL LIFE.

Not only in specific and adapted methods of physical training do we find a recognition of a new ideal, but also in the careful study that is being made of

those methods and habits of life, which go to make the body the best brain and nerve feeder and the most active manipulator of material things. A new chemistry and a new biology have made possible a scientific study of foods, for instance. General knowledge with regard to them is rapidly increasing. Restaurants begin to advertise, not the cheapness of their articles, but the fact that they have taken prizes in cooking competitions. It is rare to meet a man to-day who does not understand that a beefsteak contains more energy than a cabbage, and that it takes less energy to extract it. The American people are now the best fed in the world, and hence are able to do the most productive work. In the matter of clothing, its protecting and invigorating qualities are taking the first place in the attention, esthetic quality is coming next, and mere conventionality is receding into the back ground, and giving promise that in time it will become the last. French caprice no longer holds undisputed sway. In America man has emancipated woman from his undue control, and woman is now proceeding to further emancipate herself from the unnecessary conventionality in dress and other elements of life.

Again, it is being recognized that a physician who can attend a family, and keep its members working at maximum efficiency is more valuable than one who merely cures its diseases, and in fact to a large extent makes the latter superflous. Competent authorities estimate that one-half of lives

are lost from ignorant violations of simple laws of health; and it may be added that one-half of the efficiency of the remainder is destroyed in the same way. The efficiency of the race can probably be at least doubled by the right physical development and habits of life.

SELECTION AND ADAPTION.

While higher conceptions of the physical ideal are beginning to gain ground, and while some appropriate methods of work are appearing and being employed, much remains to be done. Nowhere has there been more crude empiricism than in methods of physical culture. What will suit the Swede, may not suit the more nervous American. What is best for the hemmed-in German, may not be best for the free Anglo-Saxon. One professional man sees another recuperate by use of the bicycle or chest weights and he at once and in every respect imitates him, ignorant that the use of the bicycle sometimes seriously affects the kidneys, and that the right use of chest weights often requires a long course of preliminary training. To farm a piece of ground to the best advantage, requires years of experiment and observation. The human body is much more complex than a piece of ground, and requires much careful experiment and observation, to develop it into its highest efficiency. All the best systems of physical education are now transplanted to our shores; the problem before the general edu-

cator is to select and combine and adapt, and thus form the best general method for school work.

Beside this scheme of physical culture to be worked out, it remains for each individual to discover and form the best possible system of physical life for himself. Philip Gilbert Hamerton in his Intellectual Life mentions the case of a man, afflicted with moroseness and continual depression of spirits, who was changed into a happy, cheerful man by simply eating a light breakfast instead of the heavy breakfast of fried eggs and bacon to which he was accustomed. With most individuals a single change is not sufficient. The writer knows of another man formerly in imperfect health, who was restored to full efficiency of physical life only after he had stopped eating apples before going to bed, and imperfectly cooked oatmeal for breakfast, ceased drinking hard limestone water, and taking a daily bath which was sapping his vitality. If a man will keep a careful oversight of himself and his fluctuations of energy, he can learn almost every week, some new fact in the economy of diet or daily routine which will add much to the efficiency of his physical life. In the matter of exercise or physical recreation he particularly learns the lesson of personal adaptation. He learns how best to combine indoor exercise with recreative life in the fresh air ; what gymnastic work is sufficient to send the blood bounding to the remotest cell of the body, and how best then in the open air to fill that blood with oxygen, and thus stimulate all the functions

to an easy efficiency and fill the body with new life. He learns in time that if he take his walks each day to the leeward of the town, he continues to breathe the gases and used up air blown therefrom, while if he walk to the windward, he breathes that germless air which has blown perhaps over mountain and forest for a hundred miles and has gained in purity and vigor all the way. He learns the elevated points in the neighboring country, and walking to one or more of them daily lets his mind wander for a few moments over the landscape and gather a broad exhilaration. He learns all those diversities and uniformities which fill him as an individual with the most fruitful vigor of nerve and brain.

THE CHRISTIAN IDEAL.

If we turn again to the moral and religious element in education, we find that it has a most important relation to physicial culture. The progress of the past and the hope of the future alike are found essentially in Christianity. The new physical ideal is in the main but the expression and outcome of Christian ideas. Jesus gave the world higher conceptions of man, his duty, usefulness and privileges. He opened vistas of higher and nobler life. As man has attempted to realize these, his views of himself and his physical nature have been refined and ennobled. The instant result of Christ's doctrine is seen in Paul's solemn, almost awful question "Know ye not that your

body is the temple of the Holy Ghost?" The human race since Paul has been trying to grasp the full meaning of this solemn new ideal, and has taken but a few steps in realization of it.

Christian training also has power to help men to go on further in this progressive attainment of the physical ideal, which is presented to us and required of us. A large part of physical culture is simply getting morality, punctuality, temperance, courage, obedience organized into the various parts of the body.

The penances of religious devotees show the power over the body which religious feeling gives the possessor. If religion can give such power to punish and to scourge, it ought to bestow still greater power to control and to develop. The three ideas of sin, of duty, and of blessedness are the three strongest in the whole gamut of human motives; given that they have possession of a man, they have power completely to control him. Let the individual thoroughly feel that to neglect any law of health is a sin; let him feel that to develop himself to the highest efficiency of physical life, in order that he may thus live a longer and more intensely useful life, is a duty; let him feel that to be full of radiant vigor, to be a part of the active, thrilling essence of all things, is one of his most blessed privileges; let him feel that this blessedness brings a thousand other blessednesses and he has motives which will control him from all excesses, make him patient and persevering in effort,

and fill him with an expansive ambition to attain every possible fulness and effectiveness of physical life. Physical culture is being carried on in the most rapid and efficient way, only when in conjunction with moral and religious development.

CHAPTER VII.

ADULT EDUCATION.

THE PEOPLE'S PURPOSE.

ONE of the most striking phenomena of the closing years of the nineteenth century is the development, in the leading nations of the world, of what may be termed systems of adult education. These movements take different forms in different lands, but everywhere the common purpose is manifesting itself among men in all stages of life and labor, to learn and enjoy the best that is to be known. Machinery is making leisure, popular government is distributing it, the people are more and more expending it in gaining knowledge and thus getting a broader and firmer grasp of the stream of existence in which they find themselves placed.

I. IN THE LAND OF PHILOSOPHY AND SCIENCE.

One form in which this movement appears in Germany is in what are known as "continuation schools." By means of these, those who have graduated from what correspond to our public schools, and are engaged in occupations by which they gain a livelihood, can, in special afternoon or evening schools during from five to twelve hours

per week further carry on their education. "So[1] complete is this system that even the waiters at the hotels, up to the age of seventeen, attend afternoon classes, and are taught one or two foreign languages." In some parts of Germany continuation education is compulsory. In other parts of Germany and in Switzerland opinion is ripening into a conviction that this form of education should be compulsory for even the poorest classes, and it is "in contemplation to extend it to all the States of the Empire, and Austria will probably follow suit."

Besides this more general system of continuation education, there are special institutions scattered through Germany whose function is the education of adults. Thus in Berlin, there is the very interesting Urania Gesellschaft,[2] an institution whose object is the general scientific instruction of the people free of charge. It is a joint stock company, but is supported in part by the government. In less than a year, over nine hundred lectures were given to audiences averaging over a thousand. Six telescopes are provided for the use of visitors. "The physical department is even better supplied with apparatus than the astronomical, and it is so arranged that visitors, by pressing different buttons may view the spectra of various substances, the phenomena of polarization, and many electrical effects. The recent presentation of two complete phonographs by Mr. Edison gives the science collection . . . a still higher value." A journal is published free to all members. The large gen-

eral attendance as well as that at the lectures shows how highly appreciated and valuable is the work done by this institution.

II. IN THE LAND OF ARTS.

In France, the overthrow of 1870 wrought many profound changes. One result is a vastly improved educational system, including provisions for adult education. It was decided that not only must the children be educated, but also that the body of the people must be kept educated. Hence the French have developed evening, Sunday, apprentice and continuation schools, science and art schools for adults, and lecture systems of all kinds.[3] Instruction in all cases is gratuitous. "The evening instruction is considered the most striking feature of the present condition of educational effort in France." "Paris is especially liberal in this respect, maintaining a great number of commercial and industrial and art and science schools, where after the labors of the day, artisans pursue the study of special subjects relating to their vocations."

But beside this technical instruction to adults, general public lectures are also given, whose object is liberal culture. The most noteworthy case is the Collége de France. When any great man appears in any department of French intellectual life, a chair may be provided for him in the Collége de France, where he delivers lectures in the evening, so that men busy in professional work can attend

them and keep abreast of the best culture of the world. Journalists, literateurs, lawyers, all classes whether culture be primary or secondary to them, avail themselves of these advantages. Maspero, the Egyptologist, thus lectures. Thus Rénan was enabled to mould the intellectual life of the French capital.

III. IN A REMOTE PROVINCE.

Nor is adult education on the continent of Europe confined to the two leading culture nations, France and Germany. It is very significant to read that, in Finland, an arctic province of Russia, not only does a very efficient system of elementary education exist, so that practically all inhabitants can read and write, but also adult education is making an increasing place for itself. Numerous agricultural and similar practical schools have been established throughout the land, where adults are taught and "where the teachings of the university and the discoveries of the laboratory are brought within the reach of the humblest classes." The peasants of the remotest hamlets have their newspaper, and so keep in touch with the world's progress. An association in Helsingfors has opened a people's library where books, journals and reviews are at the disposal of the people, and "the workingmen come in thousands in autumn and winter to read them." If such can take place in a remote province, it means that profound influences are at work.

IV. IN THE LAND OF COMMERCE AND DOMINION.

In England organized adult education chiefly takes the well-known form of University Extension. The movement has spread so widely there, and has become so thoroughly established, that a special class of instructors has arisen making this kind of education their life-work, and a distinct class of text-books has been written for it. A government grant in aid of the movement is being agitated.

Many facts go to show that the people have been roused to self-activity in the matter. "At several centers in the North of England[4] the courses have been regularly attended by many hundreds of artisans, and the funds to defray the expenses of these lectures have been provided by workingmen's societies. The results of the examinations have in many places been most satisfactory." "Teachers bear testimony to the efficiency and capacity of the students." During the summer vacations, the universities of Oxford and Cambridge are opened to those who have excelled in University Extension work elsewhere. In England adult and recreative education also takes the form of education by guilds, many of which receive government aid. Many thousands of artisans in one hundred and thirteen towns are reached by this form of education. In Manchester, a simple cotton operative made such progress in one of these schools that he gained a silver medal in honors over a great number of competitors, and in consequence was appointed superintendent of a large establishment. This furnishes

a simple but striking illustration of the new ways in which the people are using their power in order to elevate themselves.

V. IN THE HOME LAND.

Transplanted to this country the method of University Extension has been rapidly embodied in the intellectual life of the people as a method of adult education. It is estimated that it has directly reached fifty thousand people in the neighborhood of Philadelphia. The movement is aided by a state appropriation in New York. The University of Chicago has a regularly paid University Extension Faculty, co-ordinate with its other Faculties.

But the most widely extended system of adult education in the United States is the Chautauqua Literary and Scientific Circle. It is safe to say that almost every town of considerable size in the northern states has felt the influence of this movement for self-education by the American people. Its graduates number half a million. The movement has become general among the churches. The Roman Catholics have a summer school after the pattern of the Chautauqua Assembly. Jewish literary societies are uniting under a plan similar to the general Chautauquan method. It is hard to measure the manifold direct and indirect influence of these movements for good in stirring up all other educational influences in this land and those that bear on a generally higher life. Chautauqua and University Extension have led to the formation

of more or less permanent and more or less formal clubs, lecture associations, and classes for mutual improvement; they have created a culture element in the daily newspapers; they have helped develop a vast periodical literature such as is found nowhere else in the world; in all these ways they are profoundly enriching American life.

WOMAN'S PLACE IN ADULT EDUCATION.

These general results are bound to be greatly increased by the higher education of woman. In France but five or six per cent. of the pupils in the secondary schools (those between the primary schools and the colleges) are girls, while in America in the same grade of institutions, the number of girls is to the number of boys as five to four. The number of young women taking a liberal college education is also likely in the near future to exceed the number of young men. The beginning of the twentieth century will probably see the women of America better educated than the young men. This is a fact of the utmost importance when we take into account the other fact, that women of America are rapidly becoming the leisure class and virtual aristocracy of the land. Here where leisure is being so rapidly made, it is being handed over to the women of the country to be used to the best advantage. The better educated woman is, the higher is the use which she makes of this leisure, and the more of it does she turn to her own continuation education and the education of others.

Hence we find culture clubs composed of women springing up all over the land, even small towns sometimes containing two or three. The effect of these in maintaining the culture of families, in keeping business men broadened and full of the best thought of the time, and inspiring the best education of children can scarcely be overestimated in its future results.

FREE PUBLIC LIBRARIES.

One of the most noteworthy features of adult education in the United States is the movement toward free or practically free Public Libraries. The inspiration and example of the Boston Free Public Library has been of almost untold value. Most of the large cities in this land now have a public library of some sort. In 1884 there were more than five thousand public libraries in the United States, containing more than twenty million volumes, or one volume to every two and a half inhabitants.

Men like Carnegie, Tilden, Newberry and Crerar, make libraries their special benefactions. "An imperfect report of the gifts and bequests to libraries in the United States of which record could be obtained, which was made to the conference of librarians in San Francisco in October, 1891, placed the total at nearly twenty-four millions of dollars. Besides this some states are making laws and appointing Free Public Library Commissions, with a view to aiding localities in establishing free libra-

ries. The commission appointed in Massachusetts in 1890 assisted thirty-seven towns in establishing these, so that in 1891 out of three hundred and fifty-three towns in the state two hundred and eighty-three had libraries free, or open to the public at a nominal charge. New Hampshire has a similar Commission. Such facilities cannot but be a powerful agency in the education of adults and the young alike.

I. VALUE IN SOCIAL PROBLEMS.

A general survey of the most cultured countries of the world thus shows a distinct movement toward organized adult or continuation education. "Education[6] is no longer regarded as belonging to one period of life or to particular learned classes, but is tending to be recognized as a constant interest of adult life, side by side with religion, politics and commerce." The people are realizing that "man needs knowledge not only as a means of livelihood but as a means of life." The nineteenth century has settled the question of popular rights. The twentieth is to solve the problem of the use to be made of them. In adult and recreative education we are entering on one way of using popular rights and the leisure gained and distributed by them. Such a movement means much for the general happiness and welfare of the people. It is something like a new era when the artisan of Birmingham uses the laboratories of Cambridge, the plumber of London those of Oxford, when the

socialist of Berlin has the culture and scientific appliances of the world's greatest educational center at his command, when the reporter of the Paris newspaper may hear at no cost the lectures of Maspero, when the peasant of Finland has agricultural and forestry schools, and when the negro freedman and pauper immigrant of the United States have free public schools for early life and free public libraries for after life. In some lands and under certain conditions, the movement may solve difficult social problems. The sincerely dissatisfied classes in the world are those that desire a fuller life and believe that they are unjustly shut off from it. The prime cause of real discontent is a hedged-in life. Anarchists and socialists, whatever the outward form of their complaints, are making in reality implicit, inarticulate demands for growth. Their ravings are dumb cries for a fuller life. It is significant then to hear a member of the English Parliament, who has made a study of the subject, say, that largely owing to the benefits of continuation schools, in Germany "there is no such thing as an uneducated class; there are no such things speaking broadly as neglected uncared for children. . . . . They find by experience that wherever it [the continuation school] is adopted it gives an enormous advantage to the people in the competition of life, and, above all, trains them to habits of industry and mental application. I believe that it is owing to this system of thorough education that Germany has almost extinguished the pauper

and semi-pauper class, which is the bane and disgrace of our country. . . . Indeed I have not seen since I left home a single case of a ragged or begging child."

II. VALUE IN FORMAL EDUCATION.

Not only may general continued education thus have a profound direct effect on the social and political condition of a people and their general welfare, it also, as we have already suggested, deeply affects and benefits the whole educational system of a land. A fully effective scheme of training can be had only when the people as a whole are educated and kept educated and move forward as a living unit. The schools cannot be much in advance of the people's ideas. Schools are what the teachers make them, teachers are such as school boards select, and school boards represent the people, their intelligence and desires when the community is enlightened and wide-awake, but too often otherwise merely their indifference and ignorance. Hence the schools are largely a reflex of the people.

This also is particularly true in a country where the people rule. In Germany an intelligent and progressive Minister of Public Instruction can do much of himself, but in America we must have people at least appreciative of good schools and able to select good teachers and systems. Adult education keeps the schools adapted to the needs of the life of the land and organically interactive with

them. The people are thus enabled to transfer the knowledge of the schools into practical life and propagate it through all elements of life; they are also enabled more intelligently to transfer practical facts and economies, and the best and freshest business and common sense principles into the schools. In this double way they keep the schools in live harmony with the life of the world. In the old days when education pertained only to the youthful training of a particular class for some special purpose, as the priesthood or diplomacy, education became a thing apart. It did not progress and in many cases degenerated. But now, parents that are themselves growing are keenly appreciative of the growth processes of the child, and become intelligently and earnestly watchful that the child shall have every facility of teacher, appliance and system.

The consummation of the movement will be a perfected and coherent system of national education as an indispensable part of the national life. Prof. R. G. Moulton, formerly of England, says, "When the tendency is complete, we may expect to see the (adult) nation all over the country organizing itself for educational purposes, still making use of 'universities,' 'colleges,' etc., as bodies of educational specialists, but itself carrying on the administration of the education in local institutions or unions of local institutions, so that universities, such as Oxford, Cambridge, Durham, etc., will be merged into a wider *University of*

England; just as 'the state' means [not Parliament] but the nation acting in its political capacity [through crown, Houses of Parliament, municipal councils, local boards, magistrates, juries, electoral constituents, etc.,] so the 'University of England' will mean the nation acting in its educational capacity [through whatever local and central institutions may be convenient]." In other words the completion of adult education means the completion and perfection of the general system of education of a land.

III. IMMIGRATION AND HEREDITY.

When the education of a people is made general in some such way, we may also look for a proper and maintained realization of the importance of hereditary and pre-natal influences in developing the races of the earth. Francis Galton,[7] who has made a study of the subject, estimates that in a scale of races laid down and adopted by him, the Anglo-Saxon race is two degrees higher than the Negro, and that the Athenian or Greek race was two degrees higher in intellectual power than the present Anglo-Saxon. This great superiority of the Athenian race he regards as largely due to conditions and laws that attracted the pick and cream of the Greek colonies to Athens for a period. The after sudden falling off of this race he regards as largely due to the immigration of great numbers of inferior peoples to Athens, attracted by the material prosperity of the capital. If this is so,

we have here a vivid picture of how much may be gained and how much lost by rightly or wrongly governing the mingling of races and families. It suggests that the noble stock begotten in America by the combinationed union of Puritan, Cavalier, Scotch-Irish and Huguenot colonists, and to which the world owes so much for its freedom and enlightenment, may as suddenly deteriorate as did the Athenian race, under a vaster immigration of inferior peoples, attracted by the greater material prosperity generated by our first greatness. It calls forcibly to mind the more general fact that nature has profound and far-reaching laws governing not only the mingling of races, but also the result of individual marriages, that there are pre-natal influences which affect and go far to wreck or richly endow at the outset each individual life. The importance of these facts Horace Bushnell has eloquently pointed out in his book on "Christian Nurture." Yet they have been strangely disregarded in the past. In public affairs "not more than two or three law-givers have ever made the ennobling of their stock a subject of practical attention." And in private life the neglect has been almost equally great. Impulse has not been made to yield to knowledge and wisdom. A source of hope for the future lies in a general and maintained education of the people.

When parents are educated in this matter, and appreciate its importance sufficiently to carefully regard and cherish every pre-natal influence that

shall endow the child with health, purity, and intelligence, when they shall at the same time as carefully guard it from every sudden wrecking, or insidiously destructive influence; when parents shall have learned the importance and the methods of repressing every hurtful hereditary tendency, and cherishing every valuable one both in themselves and their off-spring, when, as a body, the people have learned to appreciate the immense results that may accrue from the right mingling of races, then may we expect individual and general actions in these matters.

If the general education of the people is religious, their attention to this matter will be more conscientious, swift and effective. Religious parents have the most far-reaching conception of the value of a child born to them as sacred in a manifold way. It is sacred as being born to an unending existence; as possessing powers and germs of influence for good and evil that are unlimited; as sacred in the eye of God. Hence races truly religious, like the Hebrew and German, have had the deepest and truest family life. No one has equal motives with such parents to search out all the laws which affect life and the soul's welfare in all their incipiencies; to determine streams of ancestral influence and govern and adapt them. They will strive in every way that their children be born near the kingdom of God.

In general, in order that adult education duly perform its function, it should be religious in spirit

and have a distinct religious element. Otherwise it may become a mere fad or dilettante amusement. Religion reveals a moral and spiritual value in all knowledge as affecting conduct and developing blessedness. It keeps in mind the vast needs of the world, its contracted lives, and positive miseries. It carries adult education into practice and makes it effective for good, and thus keeps it developing without pause.

THE RELIGIOUS ELEMENT IN ADULT EDUCATION.

Religion is also an aid in the process of adult education where such help is the most needed. When the mind has become matured and fixed, expansion is difficult. Here the supreme expansive force, which we have shown religious ideas to possess, does invaluable service. When working without the full aid of a teacher, it is difficult for many to maintain a high standard of work. When working alone to attain accuracy and a thorough organization of the faculties, requires the employment of every resource of will power. Here again a conscientious spirit is an invaluable aid.

Religion for its own sake also urges the full development of adult education. Thus only can religion complete itself and its details, in action and in blessedness. The needs of the world change from generation to generation, from year to year even. Some disappear in reality though remaining in form. New ones appear in hidden ways. The methods by which best to meet the needs of the

world, change with every new fact discovered and every new invention. It is only by constantly and systematically informing themselves that people can learn the real needs of the world, and the most fundamental and inclusive ways of meeting these. New moral facts, new sources of blessedness are also discovered from year to year. Only by adult study and self-improvement are those main principles of ethics and religion, which are ever the same, kept completed in an ever new fulness of detail and clothed in an ever new richness of concrete expression.

Hence it is full of interest to observe that the great popular religious movements of the age, as the Society for Christian Endeavor and the Epworth League, have educational or general culture elements; and that on the other hand, adult education often has a distinct religious element, that the Chautauqua movement was born in a camp-meeting, that in University Extension Biblical study is one of the most popular courses, that Prof. Moulton's literary study and interpretative recitations of the Bible occupy a foremost place; that along with the general development of adult education has arisen a vast Biblical literature. It argues much not only for the future of adult education, but for the general welfare of the world.

CHAPTER VIII.

THE USE OF BOOKS.

THE WEALTH OF BOOKS.

ACCORDING to Simon Newcomb it would take a good-sized printed book to contain merely the titles of those periodicals devoted to the publication of original investigations, and containing really new additions to human knowledge, which have been published within the last three hundred years. Many of these single titles would stand for a series of two hundred or more volumes, each volume being full of more or less important observed facts, or the most profound deductive investigations.

The Index-catalogue of the Medical Library in the Surgeon-General's office at Washington, gives some adequate notion of how vast is the accumulation of facts in a single department of knowledge. The medical library of the United States Government is admittedly on the whole the best in the world. This catalogue of the titles of nearly all books and articles written on medical subjects, which may be taken as reasonably complete, will, when finished, fill thirteen volumes of about one thousand pages each. A single subject, as "the eye" occupies ninety-nine pages and has references

to nearly eight thousand books and articles. The total number of books and articles referred to in the entire Index, will not fall far short of half a million. This vast accumulation is increasing at a stupendous rate. The number of medical periodicals taken for the library in 1886, was three thousand two hundred and seventy, an increase of two hundred and sixty-five over the preceding year.

Even vaster is the aggregate of what is called general literature. Sixty thousand new books are published each year. Within the last thirty years our national literature has doubled itself. In this century every civilized country, all the smaller states of Europe, as well as the more recently civilized nations of the world, have each been forming an individual national literature. Holland has one, Norway has one, so have Denmark, Russia, South America and Japan. The general reader stands in the presence of foreign literatures as never before. Translations and criticism have organized these new and the older literatures into a great world's literature, which our printing presses pour out at our feet in a flood.

THE PROBLEM.

This cursory glance shows how vast is the universe of facts and experience, and how important is the problem of the right use of books. This is quite as important as learning the art of personal observation. Personal investigation and re-discovery of even a small part of existing knowledge is im-

possible. If life is to be made reasonably complete, nine-tenths of the knowledge obtained by each one, beyond the livelihood horizon, must be got through the printed page. The fraction of directly gained knowledge has a greater value in enabling one rightly to interpret books than in its own immediate use. Yet notwithstanding the great importance of this problem, many, perhaps the great majority, fail of an adequate solution of it.

In the midst of such wealth, more than one is overcome with bewilderment, and even with a more or less complete despair. Some come to wander about as in a great wilderness, gathering pleasure and benefit only in a partial and spasmodic way. If they go into what is called active life, where they must have to do with affairs rather than books, they come to a state where they occasionally merely read the newest book, or where, if they have eagerness, they rush about like a child amid limitless flowers and butterflies, dropping one handful of blossoms to gather another, or throwing all aside to chase a new butterfly.

On the other hand, some, attempting to assimilate the entire mass, are enslaved by books. Books cease to be suggestors and become dictators. The culture of the man is no longer an inward growth ever fed by the essential messages which books bring, but only a lifeless heap of leaves thrown together and growing only as additional leaves are torn out of books and thrown upon it. Many who

must always have to do with books and live in and by them, have their blood changed into ink, their flesh into paper, their bones into pasteboard, their skin into calf and morocco. They become books plus the power of motion.

The wise teacher realizing that he can not hope personally and directly to lead a pupil through more than a fraction of any department of knowledge or literature, strives to give him a method, and then an inclination and a power, to roam and master extensively for himself. Realizing the dangers as well as the privileges of the general reader, he strives to give each learner such a method that he shall always retain a broad and nutritive mastery over printed literature. Some features, at least, of this method are evident.

I. THE GREAT BOOK.

Alike in professional and general reading, it is more important each year that we go at once to the great books, and that as early as possible the young mind learn to love and use them. The more numerous books become, the more valuable are the great, inclusive ones. "There are books which take rank in our lives, with parents and lovers and passionate experiences, so medicinal, so stringent, so revolutionary, so authentic are they." We must pass by (at least for the time being) the partial books, the imperfect, the secondary, the echoes, and go at once to these, the complete and perfect books. We must pass over minor litera-

ture, that which is current and transitory, the hasty, superficial and frothy, and go to those books which have come to the top with great emphasis in our day, or which living down through the past, and surviving the shocks of centuries and the deaths of civilizations, have won for themselves a permanent place in the heart of the human family.

It is more and more useless to try to read all books. As Holmes has said, we might as well try to race with a locomotive as with the modern printing press. One can shake hands and say a word to every one he meets along a country road but not in a city. Literature was once like the country but is now like a metropolis. But if we go at once to the great books and master them, we shall in a measure be masters of all other books. If we have seen Niagara, we have seen the essence of all cataracts. If we have seen the big trees of California, we do not need to go to visit smaller trees. If we have been in a storm at sea, no other storm can teach us much. If we have heard Webster or Demosthenes, we have heard the best that any orator can say. When we are masters of Milton and Browning, a few glances will give us all that we need from a lesser poet. Great books are like great cities. As London contains more Irishmen than Dublin, and more Scotchmen than Edinburgh, and more Jews than Palestine, so Shakspeare contains more of lyric beauty than Shelly, more of historic interest than Scott, more knowledge of the human heart than Browning, though these, too, are

great. When we are masters of a book that has been the seed of a new literature, we are masters largely of that literature, and more broadly when we are masters of the book that has been the seed of a new civilization, we are masters of that civilization.

When we know the great, inclusive books therefore we can be largely careless to what extent we read the smaller, the derived books. If ever we have time, we can gather from them much of value, many supplementary scraps, items, details,—but we can for many purposes be careless whether we read all of minor literature or not. The more the world grows, the more do its great books contain, the more do they tower up into distinct, superior importance.

But beyond dispute the greatest of all books is the Bible. Each year this book towers up more emphatically into supreme importance. The more sin and evil accumulate as a present fact or as a record, the more valuable do the great remedial principles in this book become. As the details of life increase and become multitudinous, the importance of the general principles in the Bible increases. Whatever adds to the sweetness or brilliancy or blessedness of life adds to the value of the Bible, for in this book we find the means of attaining complete and enduring life. As books increase, therefore, the more the Bible should be read and made the center and essence of life.

II. SEARCHING OUT THE ESSENCE.

In the use of books it is also increasingly necessary to be able swiftly to search out the essence of each, to reject the false and superfluous, but to get at and retain the essential idea, that which includes or suggests the rest. The masterly reader thinks through a book, above it, below it, around it. He doubts it, questions it, pulverizes it. As the eye runs down the page, the mind says this is so, and this is not so. These pages are words, words, words; this half page is full of suggestion. There has been built up within him a fierce, relentless logic, which by a few flashes can dissolve the vital message of a book away from the rest of its contents; which can often penetrate into the distant and unread part of a book, detect the vital message there and draw it forth.

Having thus learned to dissolve the book, what he does not need he rejects more peremptorily than ever before. When Lord Nelson received sensible instructions from the ministers at home, he read them with his good eye. When he received absurd instructions he read them with his glass eye. The masterly reader treats the messages of books in the same way. In the greatest books he finds much that he does not need. As Emerson has pointed out, the perfect poet has not yet been. Milton is too learned, while Homer sticks too close to common life. In Shakspeare are found, not infrequently, mixed and strained metaphors, sometimes weak and insufficient motive in the charac-

ters portrayed, and humor that is either obsolete, or gross and vulgar. Walter Scott's novels are often inexpressibly tedious to the quick-witted American, who can gather in a chapter at a glance. Thackeray is full of cynical moralizing. Dickens is in places maudlin and sensational. Large portions of the works of these great writers have become useless to this age. Many pages and chapters of the greatest books are continually drifting out of the world's life and thought, and in some books that were once all needful to mankind only here a necessary passage and there a necessary line are left. All else he peremptorily rejects.

One of the means of determining the true meaning of a book has already been indicated. It is to have done for one's self some personal, concrete work; to be carrying on processes of discovery and construction in some department of life, however small. When such a person is a reader, from his own experience he knows what a book is and what it is not. He sees what is being elaborated and condensed in one, and what is the goal and inclusive point of the condensation. In time he learns how truly literature resembles vegetation and other forms of life, and how one noble form of the present often includes many predecessors and contemporaries.

But beyond this and all other similar methods, the altruistic spirit and religious ideas have a function here also. The truest essence of a book is the divine or spiritual essence. The broadest base-line

from which to measure a book, is the religious baseline. To select what is related to life, the present and future welfare of the people and the general good of the world, this gives the best mastery of a book. Again and again it has been illustrated that where others find an indefinite tangle, a simple Christian faith finds a clear, direct path. In the mazes of speculation and the increasing wilderness of facts, this faith is an ever more valuable guide. An intense, religious interest in life, enables us to discriminate and extract the essence of literature in the best way.

III. ASSIMILATION OF THE ESSENCE.

In the use of books, it is also increasingly important to employ every means of swift but thorough assimilation of their essential ideas. It is not difficult to point out some of the more obvious of these means. In reading, as in study, modern education teaches us to begin with the simple, concrete, narrative masterpieces, and learn from them till the developed taste can appreciate the complex, the abstract, the philosophical. There are complexities in literature beyond the power of the beginner to enjoy, however they may thrill with delight the critic whose taste has been extending and completing itself for fifty years. There are touches of nature beyond a limited experience to appreciate. It is fatal to labor with books containing these, till by a repeated exercise of the sense of duty and the sense of shame, we persuade

ourselves that we enjoy what we really do not understand. More than one busy young preacher in taking up literature in his first leisure, has begun with Milton's Paradise Lost, largely attracted perhaps by the nature of the subject, and has had ever after a secret dyspepsia for all poetry. Perhaps there is no element in the entire range of poetry, which it requires a more profound poetic taste to appreciate, than the peculiar grandeur of the speeches of the lost angels. To the beginner, these speeches, filling page after page, are tedious beyond all language. But let him read first the simple poets, Longfellow and Burns, then Tennyson and Gray, and afterward Shakspeare and Homer. These mastered, Milton will afford a new and perhaps profounder pleasure than anything that has preceded, and Milton's Satan will appear one of the sublimest figures that ever battled against hopeless adversity.

Again, many will find their powers of assimilation growing more rapidly, if they begin by reading those master-pieces suited to one in their peculiar circumstances. A boy of fourteen sees somewhere that, as a piece of humor, Don Quixote has no superior in all literature. He tries to read it but finds nothing amusing in it, only a string of rather dull adventures. An old knight falling in love with a Dulcinea and riding out to do exploits in her honor and tilting with his lance at a windmill, what can there be comical in that to a boy who himself, perhaps, in shy imagination pays

worship to some fair girl friend as a princess, and who has a fort back in the woods, and hunts with bow and arrow around through the bushes after Indians? But the same boy on reading Scott's novel, Guy Mannering, is greatly amused when he comes to Dominie Sampson. That a man could be so absorbed in his studies that he could not tell when his clothes wore out, so absorbed that when his friends substituted new garments, he could only dimly remark a few days later that the change of weather seemed to be agreeing with his clothes, that any man could care so much for study and so little for concrete life as all that, is hugely comical. The city boy will assimilate what the country boy will not. The editor will find a nutritive delight in what the business man finds distasteful. Let each begin where his nature feels delight, and new power will come.

More valuable than either of these means perhaps, is to cultivate one's faculty of entering personally into the matter of a book, the dramatic faculty with reference to the printed page. All have heard of how Macaulay read, how he often might be seen in his lifetime threading his way through the crowds of London streets, open book in hand, altogether oblivious of his surroundings, with tears streaming down his face as he read some story like the parting of Hector and Andromache. All have read how Coleridge when a young man, after reading the story of Hero and Leander, went walking down a London street swinging out his

arms horizontally with much force in swimming fashion, dreaming that he too was making his way across the Hellespont, and oblivious of whom he struck.

When reading thus there is no veil of symbols between us and the truth. The whole brain is as sensitive as a retina. The printed characters smite it with aggressive force and find in it an answering sensitiveness. The whole book stands up as one mighty picture and is read. Assimilation is not effort. We do not think. The book thinks itself into us, throbs and palpitates its vital message into our inmost being. It is person touching person.

This is a power most needed in this overwhelming, material, unidealistic age. It can be cultivated by reading vivid books, those full of details like Defoe's, or Boswell's Life of Johnson. It can be cultivated by self-surrender to the emotions aroused by books. When the reader feels a good book stirring him, he can give way to the excitement. He can suffer the feelings aroused to rock him to and fro. Such surrender to a book is its highest mastery. Every tear shed over a printed tragedy is a precious jewel. Man sins when he does not cherish those rare and exalted moods in which the past and distant, and the beings inhabiting them stand actually before him.

But the deepest interest which a book can arouse is a religious interest. A true altruistic spirit should give a keener sense of personal relations to its matter and characters, than anything else. A

religious interest and an altruistic spirit together should create the most vivid picture, arouse the most nutritive delight, and cause the most swift and thorough assimilation.

THE PRINCESS' QUEST.

In the Arabian Nights we read of a princess who, having heard of three wonderful objects, a talking bird that could reason, a singing tree every leaf of which made delicious music, and a yellow water which when put in a dish could rise of itself and form a cooling fountain twenty feet high, was pining away with longing to possess them. In order to gratify her, her two brothers, having discovered after long search the hill on which these objects were, proceeded in turn to ascend it. A host of demons gathered behind them, and shouted threats and insults. On turning about to face these demons, they were turned into stones as had been the fate of multitudes of others before them in making the same attempt. The sister, more unhappy than ever, resolved to attempt the achievement herself, and what manly strength and courage had failed to do, feminine ingenuity succeeded in accomplishing. For putting some wax in her ears, she safely reached the top of the hill, and there possessed herself of the three treasures. The talking bird told her that if she would sprinkle some of the yellow water on the stones on the hillside, they would all change back into men. Under the magic touch, up sprang princes in full armor,

the brave and handsome of many ages, and among them to her infinite delight her lost brothers. The final scene has a chief meaning to us here. The hillside covered with stones is a bookcase full of books. The princess sprinkling water on the enchanted stones and causing them to spring up living men and brothers, is that faculty of man, part of the divine breath breathed into him at the beginning, a spiritual imagination, which changes books from lumps of matter to breathing, thinking, human beings. It causes the fraternal essence of printed fact and story to stand out alive, and enables us to clasp it to ourselves in a tie as of one blood and one soul, and to face the world with a fuller creative power.

CHAPTER IX.

THE TEACHER.

THREE GREAT SYSTEMS.

CONDITIONS and aims being understood, the three most effective systems of education probably, that the world has ever seen are the Jewish, Jesuit and German systems. Other schools have produced broader results, and other systems have had greater single features, but none have excelled these three in the thoroughness and endurance which characterize the immediate results aimed at and attained. It is noticeable that in each of these systems the teacher is the primary object of attention.

I. THE TEACHER IN THE JEWISH SYSTEM.

Among the Jews teachers were accorded extraordinary honor. They are called[1] "those true guardians of the city." "If your teacher and your father," says the Talmud, "have need of your assistance, help your teacher before helping your father, for the latter has given you only the life of this world, while the former has secured for you the life of the world to come." "Each scribe outweighs all the common people," says the Mishna. "To supply a learned man with the means of gain-

ing money in trade would procure a high place in heaven." Sages were to be saluted as kings, and in some respects had the priority of kings. It was not lawful to sit down to eat with an unlettered man, but was lawful with a heretic or Samaritan provided he were learned.

The Jew made it a duty of the parent to instruct his children. We might almost say that the father was exalted into a teacher. "The father was 'bound to teach his son.' To impart to the child knowledge of the Torah, conferred as great spiritual distinction as if a man had received the Law itself on Mount Horeb. Every other engagement, even the necessary meal should give place to this paramount duty."

Teachers thus supremely honored and doing their work with proportionate zeal, and parents thus made into teachers, have produced extraordinary results. "If ever a people has demonstrated the power of education, it is the people of Israel." "What a singular spectacle is offered to us by that people which, dispossessed of its own country for eighteen hundred years, has been despised among the nations without losing its identity, and has maintained its existence without a country, without a government, and without a ruler, preserving with perennial energy its habits, its manners, and its faith."

II. IN THE JESUIT SYSTEM.

As is well known the order of the Jesuits was

founded with the first purpose of staying the progress of the Reformation. Luther and Colet fostered education and used it as a means to aid in spreading and establishing the new religious ideas. Loyola endeavored to use the same weapon, even more effectively if possible, to check the advance of the Reformation and undo its work. Out of his efforts arose that remarkable system of education, which seized the gifted minds of two-thirds of Europe and used them to blind and stifle its development for many centuries. It has been called "the greatest pedagogical system the ancient or the modern world has ever seen."

In it the chief stress and aim were directed toward the most thorough possible development of the teacher. Thirteen years of preparation were given to the training of each instructor. It was a maxim with the Jesuits that "a poor teacher will never produce a good pupil; and in the hands of an incompetent master the best of pupils become irredeemably perverted." In fact pedagogy as a science and our system of normal colleges originated with these cunning priests directly, but indirectly, as we have seen they are due to the Reformation.

III. IN THE GERMAN SYSTEM.

In like manner among the Germans we find the maxim "the teacher is the school." Teaching is as distinct a profession as the practice of medicine. A person is no more allowed to make the

one a makeshift occupation than the other. The official act of a teacher is no more questioned than the act of a physician. Teachers have many special privileges. When they retire, they receive pensions in proportion to their years of service. "The teaching profession in Germany has become a pride of the nation." Leading educators, men like Helmholtz and Virchow, are as much an object of national esteem, and receive as high honors as statesmen like Bismarck and generals like Von Moltke. The present emperor has appointed Prof. Helmholtz a member of his Privy Council announcing the appointment in a highly laudatory telegram. The recent celebration of Prof. Virchow's seventieth birthday[2] equals in distinction and dignity any accorded to a public man below the emperor himself. "The entire nation associated itself with the scientific societies in doing honor to the illustrious investigator of whose achievements it has for many a day been so justly proud." "The occasion was regarded as one of national importance." "In the morning, congratulations were offered to him in the large hall of the Kaiserhof Hotel, Berlin. . . . On a long table were innumerable presents, medals, diplomas, and addresses. Short speeches were delivered on behalf of a series of deputations, the first of which was headed by Dr. Bartsch, one of the chief officials of the ministry. . . . . Dr. Von Forckenbeck, the Burgomaster of Berlin, heading a deputation from the Municipality of the capital, presented Prof.

Virchow with the freedom of the city. . . . . In the afternoon a second meeting was held in the large hall of the Pathological Institute, where as the Berlin correspondent of the [*London*] *Times* says, 'an almost endless procession of learned bodies and other corporations, presenting gifts and addresses, defiled before Prof. Virchow.' . . . . More speeches were delivered in the evening when a reunion . . . of his friends and admirers was held." Bismarck may have been honored in a more sensational way, but never with more dignity or a greater completeness. The German educational system, of which the teacher is thus the heart, is, as all know, in many respects the leading one in the world.

A FUNDAMENTAL AND DIFFICULT PROBLEM.

Hence we find much in these three systems to justify the statement made by President Garfield, which has been widely noticed, but which cannot be quoted too often. "If I could be taken back into boyhood to-day, and had all the libraries and apparatus of a university, with ordinary routine professors, offered me on the one hand, and on the other, a great luminous, rich-souled man, such as Mark Hopkins was twenty years ago, in a tent in the woods alone, I should say 'Give me Mark Hopkins for my college course, rather than any university with only routine professors.'" The most important problem in any system of education is to get the right kind of teachers. The

noblest and amplest buildings, the fullest abundance of the best apparatus, the best possible text books and libraries, all these are important, but as the Jesuits keenly saw, a poor teacher nullifies them all, while a good teacher makes a university of books and apparatus out of the great world itself.

Not only is the creation of teachers the most fundamental problem in the art of education, it is also perhaps the most difficult. Taking existing systems of education, how many instructors are in any sense adequate masters of them? Let the mind of each reader run back to the teachers he has had, and count up those that have had any truly developing effect upon him. The writer was a pupil of seven different teachers in the public schools, and but one of these was really stimulating; in private schools, he was under the instruction of seven others and two of these were truly efficient; in higher schools he studied under about thirty different men and of these five or six were found in some degree stimulating, while in the whole list but three or four really had power to bring the mind out and give it grasp of life and efficient methods. Thus of these instructors about one in five or six seemed to be the proportion of reasonably efficient ones. If such is the case in established systems of education, it is easy to see that in any advance of our methods, it is still more true that the most important and difficult point is to get the right sort of teachers. As Milton says

of a proposed new method of education "Only I believe that this is not a bow for every man to shoot who counts himself a teacher, but will require sinews almost equal to those which Homer gave Ulysses."

Not only is the making of good teachers a most fundamental problem now and always, but also in the future it will be an increasingly difficult problem. As the world life increases in complexity and richness and a larger amount is to be learned in a short time, and fuller powers are to be acquired in sure, specifically, scientifically organized ways, the functions of the teacher increase in difficulty and importance. The more comprehensive and precise and delicate methods are, the more expanded and accurate must be the mind that uses them. The more we have of self-acting, mechanical principles even, the more of surrounding adjustments are to be made. The sphere of mechanical action is surrounded by a larger sphere of rational manipulation and emotional interest. More mistakes are to be foreseen and avoided, more local diversities are to be utilized. More grasp, more vigor, more enthusiasm are called for. Better mechanical appliances must be matched by an intenser, more creative living soul to make all truly effective. Every advance in educational method makes a need for a still better teacher to apply it.

A growing appreciation of the fundamental place of the teacher in systems of education, is shown in the great increase in normal colleges in

all lands where there is educational activity, by the large amount of experimentation that is being made and literature that is being written bearing on the education of teachers. Pedagogical instruction is the main purpose of a large number of summer schools. It is a department of instruction in leading universities. It is being recognized as an important part of a liberal education. Public and private effort alike are doing their best to solve the problem of making better teachers. The state establishes schools for the purpose. Voluntary effort as in the New York College for the Training of Teachers, does the same. Some men desiring to advance education give their money not for extending the application of present methods, but for their improvement or for the discovery of better ones.

I. DRAMATIC POWER.

Some of the characteristics which go to make up the needed teacher, and some of the methods by which to obtain these, are gradually becoming clear and working their way into practice. In particular every method is being devised and insisted upon to enable the teacher to understand the young and growing mind of the pupil. That the instructor should do this, is realized more emphatically each year as the basis of all good teaching. The needs and processes of the growing mind being exactly and fully understood, means of aiding it to the best advantage will come with time and experience.

But first of all the teacher must possess this dra-

matic power to put himself in the pupil's place. He must be able to shrink his mind and make it young and crude again, and then make it grow as it should. He is not simply to understand and be able to look at a boy's mind from the outside and correctly state and explain its working; the dramatic instinct is to be cultivated till it is in time an irresistible instinct, the soul of the teacher for the time, being transformed into the soul of the boy, and easily but intensely looking out on the world as the child does. He is to possess not merely a mechanical, but a personal, sympathetic knowledge of the minds and souls in his care. The poor teacher thinks that every process in a student's mind which he is not familiar with, is unsound. If a pupil demonstrates a proposition in geometry in a way new to him, he is alarmed, not gratified. If a child says "south and north" he corrects him into saying "north and south." He does not understand what extravagances, follies, skepticisms will pass away of themselves, if but the better part of the young mind be properly stimulated. If he had his way, all boys would be of the same height, weight, color, clothed alike, and of the same abilities. He tries to compress and carve down each soul under his care to fit a little harness possessed by him which he would like to see in universal use.

But the teacher who rightly apprehends his work in the world, realizes to some extent the vast number of ways in which even the simplest thing can

be done, the vast diversity of attitudes and processes in different minds, and carefully studies each, so as to realize it the better and stimulate it into higher activity and more productive originality. Some of the most successful teachers the writer knows, spend hours in trying to realize exactly the minds of his pupils, in following up clues, in unravelling and constructing their consciousnesses from hints gathered in the class room, till he can feel and see like them. Especially does he try to realize the elements of good power in them, and devise ways of stimulating and giving these powers a broader field of exercise. Every day he is surprised at some extraordinary misconception on their part which he had not dreamed of as possible. Each day some new original way of looking at things, and variation from standard methods, gives him a clue to a new important method of presentation, and one that sometimes leads to a new truth. He learns that one student is a parasite, feeding on the teacher for all his nervous energy. He learns that another has the habit of asking sage questions, while doing very little real work. He learns that another, beneath an unpromising exterior, has some unusual ability. He comes to prize every difficulty met with and every odd turn of expression used, as giving a clue to new processes of mind or investigation.

II. THE TEACHER A STUDENT.

In the performance of his work, the earnest

teacher also learns the value of himself studying something new all the time. Thomas Arnold said "I hold that a man is only fit to teach so long as he is himself learning daily." The experience of every teacher who has tried it bears out the assertion. To instruct others aright, the teacher's life must be "a constant progress of self-education." If he not only study but also recite directly and specifically to some one, just as his pupils do to him, he will make his work that much more profitable. Thus most forcibly will he realize the advantage the teacher has when asking a question, in that he has the whole subject complete in his mind while directing a question on a certain point, whereas the pupil has many imperfectly grasped and scattered points in mind and knows not which of several the question relates to. It gives more effectually than any other exercise the dramatic power, the ability to put himself in the pupil's place. It is a uniform experience with teachers, that those who have themselves once taught, make the best pupils. It is equally true that those who are themselves pupils, make the best teachers.

III. EXPERIMENTATION.

Another way in which a teacher can cultivate this dramatic power as well as his general efficiency as a teacher, and perhaps make important discoveries which will help others, is to make constant and systematic though judiciously limited experimentation a part of his pedagogical methods.

While holding to established custom in the main, it is profitable also to have some line of tentative investigation. This is one of the best means of continuing the self-development of the teacher. It is the only correct way of assimilating the methods of others. The best powers of assimilation of knowledge and method both, are those which work in conjunction with investigation and discovery. An element of experimentation gives life and vigor to work both for pupil and teacher. Each instructor, child, place, country, age, has peculiarities which can be made the sources of new power if used aright. By experiment the teacher discovers at least some of these diversities and is enabled to utilize them. The American practical business spirit has just begun to tell in the intellectual world in general, and in pedagogics in particular. In text-books on Geometry it has introduced simplifications, diminishing perhaps by one-half the labor of teaching the subject. Much work of the same and a higher sort remains to be done.

For instance, the question has arisen whether a savings bank feature can profitably be made a part of our schools.[3] Wherever it has been tried in this country it has aroused enthusiasm and been continued. It is claimed that a savings bank in connection with a school teaches early the value and use of money; it creates habits of self restraint and discrimination in doing without unnecessary things; it arouses the parents to save and gives them a new interest in schools; it makes the school room

attractive to dull children; it teaches the children to be generous but wisely so, as was exemplified in June 1889, by the children of Long Island City in voluntarily subscribing over $450 from their penny savings "to alleviate the sufferings of their brother and sister scholars," who lost parents and home in the Johnstown flood. There can be no question that we yet teach too much "as if the mediæval world were still about us." Perhaps in these banks we may have one way of taking the world as it is, teaching its best practical wisdom, but teaching it in connection with a higher culture, and a broader altruism and thus rising from the actual material basis of things to a higher idealism. Experiment only can decide the question. Not only in relation to such large educational movements is there room for experiment, but also in connection with every smaller subject and every detail of every subject.

IV. A TEACHING ERA.

Better teachers can also be made by cultivating the power and spirit of instruction generally among the people. As was pointed out in the first chapter, as the world life advances, men must learn and teach more and better, every day, in all lines of work and enjoyment. The health and happiness of the home depend largely on the ability of the mother to teach servants and children. Every man in the business world from the clerk, to the Secretary of the Treasury is a teacher or a learner. Business life is a maze of informal, unconscious

education. The labor and capital question would be largely settled, if both laborer and capitalist could learn and teach better. The highest flights of the poet and orator, the creations of the artist are but a kind of transcendental teaching. The American people succeed because they can learn so rapidly and teach in informal ways so well. Fulness and effectiveness of life are, to a great extent, proportional to this unconscious pedagogical ability.

In fact a general knowledge of the principles of teaching and learning should be a part of all education. It would not only add practical power and happiness to all life; it would go far to answer the question of how to make better professional teachers. Great men in large numbers in any department of work have been produced when the body of the people as a whole were interested in that kind of activity. The Hebrew people made the Hebrew Rabbis, because each one of the common people was more or less a Rabbi. The Athenian people made Greek art and philosophy because each person was more or less an artist and a philosopher. Roman citizenship made and unmade the Roman Empire. The people made Italian art and the Reformation. The cathedrals of the middle ages were built when the common people flocked in multitudes to aid with their labor. The ages of great preaching have been when men preached each to the other in conversation. The best way to create teachers is to convert the people into these, and thus make them appreciative of good work of this sort.

The teacher will then no longer be an object apart, safe in his mediævalisms, and existing through a sluggish routine. He will be a live part of the general organism of the world. Instruction will not be intrusted to those who regard it as a mere makeshift in gaining a livelihood, or make it a stepping stone to something else. A poor teacher will be recognized as worse than none, as doing positive harm. One who can really stir the mind and profoundly affect for good the whole future life of a child, will be enthusiastically recognized as a benefactor to the whole community, however quietly his work be done. He will be recognized as great preachers and artists are, when they do a similar work in a more striking fashion. The work of teachers will be differentiated and all possible facilities will be given to those of each class. Those best fitted to aid children in assimilation will be allowed to do work of that kind. Those best fitted to stimulate and make original workers, will be given a chosen few pupils, in a laboratory or retired study where personal contact can tell to the utmost. Every aid that will enable a teacher to do his peculiar work with more vivacity and completeness and better reap its rewards, will be afforded. Thus, perhaps, a great teaching era will be created and will endure.

THE RELIGIOUS SPIRIT IN THE TEACHER.

In all these ways, by the development of better training schools, by the direct culture of the dra-

matic element, by constant and careful experiment, and by the general pedagogical culture of the people, better teachers may be produced. But thorough culture of the religious and altruistic nature can also be made a powerful aid in this work. A true religious spirit is of the highest value to the teacher, both in itself and in developing other needed characteristics. The work of the teacher is in its nature profoundly altruistic. He must work for the child in numerous ways which the child cannot understand or appreciate, and perhaps never will fully know. In his work there is room for the employment of any wealth of altruism. Patience, love, faith, conscientiousness, all in the highest degree, and the utmost sense of the sacredness of the soul and of the privilege of first storing it with truth and leading it out into higher life, are called for. The man with a loving heart and a religious spirit is already much of a teacher. He has those qualities which are fundamental and which will bring others.

HINTS OF THIS SPIRIT.

The altruistic spirit is the beginning and essence of the dramatic spirit. "As ye would that men should do to you, do ye also to them likewise," compels a thorough understanding of others; it is the basis of Christian conduct and of pedagogy alike. The man who has learned as a Christian the lesson, "put yourself in his place," has learned the first essential lesson of the teacher. Indeed Christianity

carries the use of the dramatic element still further than we have indicated. By a sort of double use of it, the teacher is enabled to feel as the pupil does, and at the same time as does some great ideal character like Jesus. Then gradually, step by step, with patient labor and ardent love, he transforms the one into the other.

Thus a great danger to which many teachers succumb is avoided. Dealing continually with immature minds, the instructor too often allows his own soul to shrink down till it merely surrounds the mind of the child. It loses robustness, manly breadth and vigor. But the soul of the teacher, who is realizing Christ's mind as well as that of the child, is enlarged and not dwarfed. Grasping the two simultaneously, it gains the widest range and swiftest command of that range. It is also benefitted in other ways. It makes instruction a method of preserving its youth and vivacity, and keeping these spread through its larger powers. Like the mother soul it can begin at the zero point with each new child, but instead of remaining there, grows up and out with the child into a new fulness of life and renews the soul's youth on a broader basis each year.

If a teacher is to experiment, the most valuable way he can do so, is by trying to spiritualize all truth, by endeavoring to make explicit and powerful in its action on the souls of students, that moral and spiritual essence which is in all knowledge. If he is to make religion a dominant agency in giving

expansion and organization, he must himself be full of the expansions and accuracies which the right religious spirit gives. In a word the teacher truly succeeds in proportion as he is full of the spirit of Jesus, when that spirit is viewed in its widest nature.

It is worthy of note that in some of the countries where the most advanced educational systems exist, as in Germany and Sweden, instruction in religion is made a part of the course in Normal Colleges. In Sweden the teacher must have a certificate from the pastor of his parish showing that he has been confirmed and that he is of good moral character. His "examination is especially severe in religious matters." The three most effective systems of education, the Jewish, the Jesuit and the German, have not only made the teacher fundamental, but have also made the moral and religious element in the training of the teacher the first.

TWO GREAT TEACHERS.

It is not less important to note the deeply altruistic and often essentially religious nature of great individual teachers. Two of the greatest of these that ever lived were Pestalozzi and Thomas Arnold. Their natures and work were widely different in many respects, yet they were identical in these fundamental religious qualities and the effectiveness resulting therefrom. By their very diversity, taken together their cases make an illustra-

tion so complete and vivid as to have the effect of a demonstration.

PESTALOZZI.

The Christ spirit was certainly the fundamental trait in Pestalozzi's character, it was the mainspring of his life. As a boy[4] he went about with his grandfather visiting the sick and poor, and even then the desire "to lessen the evil in the world began to grow strong. 'When I am a man,' he said, 'I will be a pastor like my grandfather.' At another time he said, 'When I am big, I shall support the peasants; they ought to have the same rights as the townspeople.'" When he began to teach while living on his farm, he did so at great financial loss. A selfish financial element was nothing to him in his work. Like Jesus, he kept his pupils with him continually. He either taught them or worked with them in the fields and garden the whole day. "Pestalozzi always gave them the best potatoes in the dish and kept the worst for himself. 'I lived like a beggar,' he says, 'to teach beggars to live like men.'"

The cost of his first experiment was so great that the farm had to be let for the benefit of creditors, and the children were sent away. "He and his family were without food, fuel or money, and often suffered from cold and want. They still lived at Neubof, forsaken and scoffed at by everybody. For thirty years, Pestalozzi's life, as he says himself, was a 'well nigh hopeless struggle

with the most frightful poverty.'" "With the burning of Stanz by the French in 1798 a new period began. It was then that he took charge of a number of orphan children in a dilapidated convent, and worked night and day watching over them. All of them were ragged, most of them were ignorant, many of them vicious. He says 'I was alone with them from morning till night. It was my hand that supplied their wants, both of body and soul. We wept and smiled together. We shared our food and drink. I had neither family, friends, nor servants—nothing but them. I was with them waking and sleeping, in sickness and in health. I was the last to go to bed, the first to get up. In the bed room I prayed with them, and at their own request taught them till they fell asleep. Their clothes and bodies were intolerably filthy, but I looked after both myself and was thus constantly exposed to the risk of contagion.'"

He himself learned with them, and those that learned best were made helpers of each other. "When the neighboring town of Altdorf burnt down, he gathered the children together and said, 'Altdorf has been burnt down; perhaps at this very moment there are a hundred children there without home, food, or clothes. Will you not ask our good government to let twenty of them come and live with us?' They eagerly cried 'Yes! yes!' 'But my children think of what you are asking. Even now we have scarcely money enough.

. . . You might have to work harder, and share your clothes with these children, and sometimes perhaps to go without food.' Yet still the answer was 'Yes, yes, we are quite ready to work harder, to eat less, to share our clothes, for we want them to come.'"

Throughout his life it is clear that the Christ spirit was the fundamental trait in Pestalozzi's character. It is also clear that this was the prime source of his power as a teacher. It gave him an unexcelled dramatic power in realizing the minds of children. He and they were one. It enabled him to divine their needs and create a new method in education. From a hint dropped from one of them he developed his Object Lesson Method. It enabled him to develop the unselfish and religious natures of children, and to create in them an intense love of knowledge. It carried him on in self-development. He grew before and with them. It enabled him to use the real world about him and yet to ever rise to the loftiest idealism.

THOMAS ARNOLD.

One of the most successful teachers in all aspects of his work, whom the world has ever seen, was Thomas Arnold. The proportion of intellectually successful men among his pupils was great. Their success in Oxford and Cambridge was unprecedented. The moral and religious and manhood results of his work were such that at the universities, his students formed a type known as Arnold's

men. Fundamental in his character and work was the ethical, the religious principle. He had an intense, Christlike sympathy with those whom he taught. Like Jesus he lived with them as constantly as possible. In giving advice to a pupil of his who is about to become a teacher, he writes,[5] "I should say, have your pupils a good deal with you, and be as familiar with them as you possibly can. I did this continually more and more before I left Laleham, going to bathe with them, leaping and [doing] all other gymnastic exercises within my capacity, and sometimes sailing or rowing with them. They, I believe, always liked it, and I enjoyed it myself like a boy, and found myself constantly the better for it." One of his pupils says, "Who that ever had the happiness of being at Laleham does not remember the lightness and joyousness of heart with which he would romp and play in the garden, or plunge with a boy's delight in the Thames; or the merry fun with which he would battle with spears with his pupils?" In the evenings he also did his private work in their company. "It was only when we were all gathered up in the drawing-room after tea, amidst young men on all sides of him, that he would commence work for himself in writing his sermons or his Roman History." "'He calls us *fellows*,' was the astonished expression of the boys when, soon after his first coming [to Rugby], they heard him speak of them by the familiar name in use amongst themselves; and in later years, they observed with

pleasure the unaffected interest with which, in the long autumn afternoons, he would often stand in the school-field and watch the issue of their favorite games."

But this outward sympathy which led him to ever take such interest in their play and work alike, was but a particular expression of his inner spirit. The interest which he took in his pupils was first and inclusively a moral and religious interest. On one occasion he writes to a friend stating that during the term three boys had died and four more had been at the point of death. "You may conceive how much anxiety and distress this must have occasioned us, yet I can most truly say that it is as nothing when compared with the existence of any unusual moral evil in the school, far less distressing, far less harassing." "'If he should turn out ill,'" he said of a young boy of promise to one of his assistant-masters, and his voice trembled with emotion as he spoke, "'I think it would break my heart.'" Nor were any thoughts so bitter to him, as those suggested by the innocent faces of little boys as they first came from home,—nor any expressions of his moral indignation deeper, than when he heard of their being tormented or tempted into evil by their companions. "'It is a most touching thing to me,' he said once in the hearing of one of his former pupils, on the mention of some new comers, 'to receive a new fellow from his father—when I think what an influence there is in this place for evil as well as for

good. I do not know anything that affects me more.' "

" The university honors which his pupils obtained were very considerable, and at one time unrivalled by any school in England, and he was unfeignedly delighted whenever they occurred. But he never laid any stress upon them, and strongly deprecated any system which would encourage the notion of their being the chief end to be answered by school education." Prizes and honors he mentions only incidentally in his letters, while moral and religious matters he dwells on long and earnestly. An increase in the number of pupils he values chiefly as showing the moral efficiency of the work of the school, and the esteem in which it is therefore held.

In regard to his work at Rugby, he says, " It is my most earnest wish and I pray God that it may be my constant labor and prayer " to introduce a religious principle into education. " To do this would be . . . a happiness so great that, I think, the world would yield me nothing comparable to it." " The idea of a Christian school, again, was to him the natural result, so to speak, of the very idea of a school in itself. . . The intellectual training was not for a moment underrated . . but he looked upon the whole as bearing on the advancement of the one end of all instruction and education ; the boys were still treated as schoolboys, but as schoolboys who must grow up to be Christian men ; whose age did not prevent their faults from being sins, or their

excellences from being noble and Christian virtues; whose situation did not of itself make the application of Christian principles to their daily lives an impracticable vision."

Religious and moral excellence was to him the aim and end of all education. He was fond of dwelling on the cross which rose from the top of the School Chapel as "a visible symbol" of Christianity as the end and flower of education.

A suggestive incident showing clearly his views of education is that "Lent was marked during his last three years, by the putting up of boxes in the chapel and the boarding houses, to receive money for the poor, a practice adopted not so much with the view of relieving any actual want, as of affording the boys an opportunity of self-denial and almsgiving." It is interesting to compare this with the modern method of establishing savings banks in connection with schools. Most impressive of all is to read the words with which, when the chaplaincy of the school at Rugby became vacant, he asks that he himself may be appointed to the post "waiving, of course, altogether, the salary attached to the office." "Whoever is chaplain I must ever feel myself, as head-master, the real and proper religious instructor of the boys. No one else can feel the same interest in them. . . . . In fact it seems to me the natural and fitting thing, and the great advantage of having a separate chaplain for the school—that the master of the boys should be officially as well as really their pastor,

and that he should not devolve on another, however well qualified, one of his own most peculiar and solemn duties. . . . . I consider that . . . . I am bound to be the religious instructor of my pupils by virtue of my situation."

Full of this feeling, this opinion and this practice, he developed in full measure those more special and concrete qualities which go to make up the ideal teacher. Up out of this quality, the other essential characteristics of the perfect teacher flowered and fruited vigorously. He came clearly and fully to realize the essential principles of modern education. "His whole method was founded on the principle of awakening the intellect of every individual boy," that which is called in modern education, self-activity. "Hence it was his practice to teach by questioning. As a general rule, he never gave information, except as a kind of reward for an answer, and often withheld it altogether, or checked himself in the very act of uttering it, from a sense that those whom he was addressing had not sufficient knowledge or sympathy to entitle them to receive it. His explanations were as short as possible. . . . He not only laid great stress on original compositions, but endeavored so to choose the subjects of exercises as to oblige them to read and lead them to think for themselves. . . . Style, knowledge, correctness or incorrectness of statement or expression he always disregarded in comparison with indication or promise of real thought." As is the practice in modern education, he began with the

concrete wherever he could. He dealt a death blow to essays on abstract subjects such as "Virtus est bona res" and gave instead historical or geographical descriptions, imaginary speeches or letters; etymological accounts of words, or criticisms of books, or put religious and moral subjects in such a form as awakened a new and real interest in them.

His religious spirit kept the spirit of growth in him, as before hinted. "Intellectually as well as morally, he felt that the teacher ought to be perpetually learning. . . . 'I am sure,' he said, speaking of his pupils at Laleham, that 'I do not judge of them or expect of them as I should, if I were not taking pains to improve my own mind.'" Hence his soul was not shrunk down about theirs, but was ever expanding and expanding theirs. He took deep interest in all important practical questions of the day. His pamphlets on political questions sometimes went through several editions, and his letters to newspapers were widely read and aroused earnest discussion.

He also came to have in extraordinary measure that dramatic power which enabled him to realize the minds of students and act accordingly. "His scholars used sometimes to be startled by the knowledge of their own notions which his speeches to them implied. 'Often and often,' says one of them, 'have I said to myself "if it were one of ourselves who had just spoken, he could not more completely have known and understood our thoughts

and ideas.'''' Thus also he acquired that last quality of the teacher by which he makes pupils teachers of each other. Arnold made his Sixth Form a distinct moral force in the school. He made the general public opinion of the school a wholesome and constructive power.

Thus we find that in both these great teachers, Pestalozzi and Arnold, the Christ spirit is the first and creative quality. The two men were very different in many respects, as in nationality and language and social surroundings. Arnold had the resources and opportunities of a great public school at his command. Pestalozzi had only such pupils as he could gather up out of adversity. Arnold worked mainly in language on the plan of the old classical schools. Pestalozzi worked mainly in natural sciences. In the nature of the one, religion was explicit, in the other, implicit. In the one the religious trait was most prominent; in the other, the ethical. But in whatever form appearing, and through whatever area of concrete manifesting itself, in both these men alike the Christ spirit was the mainspring, the creative power of intense effectiveness. Through Greek and through Botany indifferently, it worked to the formation of a true and full manhood in teacher and taught alike.

THE IDEAL TEACHER.

Together then these teachers form a complete illustration of our statement that Christianity has a fundamental place in the making of those ever

better teachers which advancing civilization demands. From them we may form a picture of that ideal teacher in whom all desirable qualities shall be intensely developed and perfectly combined. Every curve of his face, every motion of his hand, every tone of his voice, and every glance of his eye are nutritive and full of growth causing power. He sows like the sower in the painting by Millet. There is a sure swift penetration of the seed to its proper place. There is no mere superficial deposit of it. He establishes a vital union between seed and soil. Truths that he utters, keep repeating themselves in the mind, they invade new areas of the being; with a direct and rapid penetration they root down.

From his being floods of vivifying sunshine also pour out. From him a nutritive light constantly beats on those about him, a warm sunshine of joy ever pulses out. It beats upon the souls about him till the seed sown in them germinates, dull fiber starts into vision, and those new souls, out of which a new and better world is to be made, appear. But this power to sow is the same power which Jesus had when he sowed in parable in the stubborn heart of the Judæan; this nutritive light pulsing and radiating from the soul of the teacher, is but part of that light which is to light the whole world.

CHAPTER X.

MORAL AND RELIGIOUS EDUCATION IN ITSELF.

MOST IMPORTANT SINGLE ELEMENT.

WE have hitherto considered the relation of moral and religious culture to the other elements of education and find this relation to be everywhere one of supreme importance. Let us now briefly consider the value of moral and religious education in itself, as a distinct part of education.

It will at once be seen that moral and religious education is the most important single element of culture, even when considered in its finite results alone.

I. MORAL AND RELIGIOUS ACTS THE MOST NUMEROUS.

The qualities given by it are needed in the right performance of every act; they are required constantly and by every one. We need to use the fact that quinine is a remedy for a cold at most but a few times a year, but we are required to apply some one of the Ten Commandments in some form a hundred times a day. The knowledge that the sum of the angles of a triangle is two right angles may be of practical value once a year—many get through life without it altogether—but we need to practice

courage and justice constantly. To know how to drive a nail right is of occasional value, but we must tell the truth, be veracious to ourselves and others, a score of times every hour. Even for the specialist this is true. The carpenter even, needs to tell the truth oftener than he drives a nail. The soldier needs to act with courage oftener than he needs to know the mechanism of his gun. The physician needs to use the Decalogue more frequently than he uses his pharmacopœia. The lawyer should use the moral law far oftener for himself than he uses the common or statute law for others.

Sometimes, also, there are distinct and prominent intellectual elements in an act, sometimes there are none. But in every act rightly performed, there are constant, essential moral qualities; if no others are present, there must be the quality of veracity often appearing in many forms, and the quality of altruism, the necessity of aid in the performance of the act, and the necessity to share its fruitage. In every constructive act there is the religious element of faith. Hence the number of times moral and religious qualities are used in life far exceeds the number of times any other knowledges or powers are employed.

II. THE MOST IMPORTANT.

Not only are religious and moral acts relatively more numerous, they are also more important and fuller of far reaching consequences, than any other

class. If a man drive a nail aright, it may save him a small, immediate financial loss; but to tell the truth, makes all life golden. A knowledge of dress-making may prevent the miscut and waste of a piece of cloth; but a loving spirit ever clothes the soul in living light. The knowledge that germs of scarlet fever travel in milk, may save a life occasionally; faith in the unseen power that sustains and controls all, saves all life continually. If a man have intellectual powers, he can make exchangeable articles; but if he have not veracity and altruism and faith, his powers cannot enrich the world. If a man have intellectuality alone, his life and work are likely to perish at any moment. A great destructive sin, a suicide of some sort is ever impending. But if a man have a developed spiritual nature, whatever he accomplishes is established; it is multiplied and endures. Underlying the success of great men, there is often a religious element, unsuspected by the general public. It may be crude and implicit but it is there, carrying forward the life with far-reaching power.

Jay Gould testified before the Board of Education, concerning his early days, when it seemed as if he must give up and go back to his father; "I sat down there and had a good cry, and all of a sudden it occurred to me that my sister's unfailing remedy when in trouble was prayer, and there in the woods I dropped on my knees, and prayed that I might have an opportunity to succeed. After that I felt better. I resolved to go ahead, and, if need be, to

die in the last ditch." Religious communities, however little stress they lay on intellectual development, are prosperous, as is exemplified by the Mennonites, Shakers, Mormons and similar religious societies. It was observed in the ancient world, that wherever one travelled among heathen or barbarous peoples, the statehouse might be missing, or the fortress, or the academy, but the temple and some form of religious worship were always found. These were indispensable to civilization, however crude and primary. In the exact language of Plutarch,[1] "if you will take the pains to travel through the world, you may find towns and cities without walls, without letters, without kings, without houses, without wealth, without money, without theatres and places of exercise; but there was never seen nor shall be seen by man any city without temples and gods, or without making use of prayers, oaths, divinations, and sacrifices for the obtaining of blessings and benefits, and the averting of curses and calamities. Nay, I am of opinion, that a city might sooner be built without any ground to fix it on, than a commonwealth constituted altogether void of any religion and opinion of the gods,—or being constituted be preserved." Morality and religion are always successful, while intellectuality alone is almost always unsuccessful. Love, truth and faith, however feeble may be the other powers that accompany them, are supremely attractive, while intellect alone is often repulsive. Thomas Arnold expresses his opinion of it thus:

"Mere intellectual acuteness, divested as it is in too many cases, of all that is comprehensive and great and good, is to be more revolting than the most helpless imbecility."

III. THE MOST DIFFICULT.

Not only are moral and religious acts more numerous and more important than any other class, they are also more difficult. While the intellectual life of nine hundred and ninety-nine of every one thousand soon becomes substantially a mechanical routine, the entire necessary moral life never become easy to the great majority of people. Intellectual effort above a certain point is avoidable, and below that point it becomes subconscious habit. By living within a narrow area and following others within that area, in time all real intellectual effort ceases. But moral acts of the most crucial and intense sort, are omnipresent and unavoidable. Moses could easily flee away from the culture life of Egypt into the wilderness of Midian, but he could not flee away from the injustice and oppression which permeated that life. About the first well to which he came he found the same moral struggle raging, which he had left in Egypt; he must see that the daughters of Jethro have justice.

The narrowness of intellectual life often increases the moral effort required. Strenuous moral exertion scarcely ceases in every ordinary, right-loving life. In Jesus' life even, the intellectual power of his thought and beauty of his language

seem spontaneous, while moral effort increases, if anything, till the climax came in Gethsemane. When we observe this fact in his life, it seems doubtful whether Moses ever attained a sweetness of spirit where unceasing meekness was preserved, at all points, without effort; or whether Aristides ever reached a point, where it was not sometimes difficult to tell the truth; or John B. Gough was so completely changed, that appetite altogether ceased to stir. Unavoidable, strenuous moral and religious effort of some sort is a constant element, or should be, in almost all lives.

IV. RELATION TO THE FUTURE.

In the future, the moral and religious element of life as compared with others, will be of even greater importance. As life becomes more full and swift, moral acts will become more numerous and far-reaching in their importance. The more exchange develops, the more acts of the higher nature of man, the more veracities, altruisms and faiths are demanded. Every man is using less and less of what he makes himself and more and more of what is made by others, and proportionately the functions of veracity and brotherly love are extended. A meal was once mainly a local or even a domestic affair. Now it is the resultant of almost innumerable, wide spread moral acts, and in the future the number of these will be vastly greater. The reader of a Philadelphia daily, in return for one cent gets the product of the labor of over eleven

hundred persons directly employed by the newspaper itself. If the newspaper is properly prepared, how many veracities and other moral acts are here combined. The time will come when an equal number of these will be combined and received in return for every cent that is expended. Every railroad gives morality a larger constructive power. Every telegraph gives love a new multiplier. Communication and concentration make a nation as mutually helpful in its parts, potentially at least, as a city once was. A great deed more quickly and manifoldly benefits the whole United States, than such an act once did the thirteen colonies. As human knowledge increases, the function of faith is also enlarged. The larger the circle of light, the larger the surrounding circle of intellectual darkness where faith reigns. Thus we see in brief that more exchange calls for more morality; more wealth for more love; more truth for more faith. In life the moral and religious element is and always will be much the largest.

It at once follows as a consequence that this element must have the first place in education, and this quite apart from its value in assisting the other processes of education. As an aid to them it is of great value; apart from them and yet in comparison with them it towers up supreme.

I. RELATION TO SO-CALLED PRACTICAL LIFE AND EDUCATION.

The whole matter may be viewed in another

light, by comparing different forms and species of education, one with another. The battle between those who favor a liberal education, and those who prefer a merely technical education is constant and at times fierce. The question is ever being asked by parent and pupil alike with regard to every study, arithmetic, algebra, psychology, "Of what use is it?" And "of what use" is narrowed more and more to mean, "how many dollars and cents will it directly turn out in the future?" What knowledge, what education is of the most worth? This question is interpreted to mean, what will produce the largest financial return in the shortest time. The doubt, for example, has gained ground "whether what is called a college education is not thrown away upon one intending to be a manufacturer or a farmer or a trader;" or further than this "whether education for any of the learned professions or scientific pursuits should concern itself with anything but the technical knowledge of those professions and pursuits." Andrew Carnegie before the Pierce School of Business says: "I have no hesitation in stating that any young man or young woman fortunate enough to have to make his or her own way in the world, chooses wisely by making an early start. I believe that three or four years spent at that time of life would be unwisely spent in trying to obtain all that a university gives to its graduates. . . . It is best as a rule to go into direct contact with practical work, real things, and obtain their education in the finest school—the

world around them—and study in their spare hours."

Mr. Chauncey M. Depew replies: "There are two boys of an equal condition in life and of about equal capacity, who are fifteen years of age and who live in a country village. They both have been through the common schools. One of them goes into the village store . . . . the other goes into the preparatory school and through college. At the end of six years the one who entered the store or mill has been six years in business and progressing along, and at the end of six years the college graduate comes in to enter the same mill or the same store which his friend did six years before. Now, [Mr.] Carnegie says that the college graduate never catches up, and that if he did catch up he has got so much Greek and Latin and mathematics and nonsense in his head, which is utterly worthless for business, that he cannot stay there when he gets there. As a matter of fact, in my observations, extending over a system that employs sixty thousand men, I find that that man with the trained mind which has been expanded so that it quickly grasps anything which is presented, who has learned how and where to look for information, who wastes no time upon the useless, but has under his control a perfect, drilled, equipped machine, masters in a few months what it took his friend as many years to master, and when he reaches the place where his friend is, instead of rattling around on a chair, he is grasping the intricacies of

business." "A liberal education gives to the mind that exercise in every department which presents its owner with the power to control its operations, to concentrate it upon the work in hand, to fit it for the relaxation which is necessary for a well-ordered intellect."

Other aspects of the same question also have been expressed by Prof. C. J. Little in the following eloquent passage: "What college can claim him [Edison] for her child? Any one college? No! But all the colleges and all the thinkers of all lands and epochs can claim him, and make good the claim. It is the glory of scholars that they have never sold their secrets. The communion of sages has been an open one; humanity has been from the beginning the only heir of science, and therefore it is that Edisons are possible; therefore it is that the whole industrial system in our day throbs and thrills to the brain-beat and the heart-beat of the noble company of thinkers who are the glory of the university, and who, though dead, are the life and substance of the modern world. For Euclid is sitting always beside the locomotive engineer, making the iron pathway safe before him, guiding him along the mountain ledge and piercing with his thought the mountain's breast; Galileo still places the sextant in the navigator's hand, while Ampére and Faraday correct his compass for him when the needle swerves deflected by the iron hull; Liebig is still walking at the plowman's side and fertilizing the barren acres with the open secrets of his

thought; Descartes and Newton help to build our bridges and our engines too; the thoughts of Priestley and Lavoisier flash out sparkling whenever the iron now turns to steel; the thoughts of Huyghens and Fresnel go flashing from the lighthouse tower to tell the mariner of danger and of home. It is black ingratitude then when so-called practical men speak contemptuously of science and higher education, for without them the industrial system of our world would pine and perish. Without them, in fact, it would never have had a being."

Likewise in the work of men of letters, Carlyle finds a most valuable practical element. Goethe helped form the national spirit of Germany; the value of this in dollars and cents, as well as in all that is higher, is seen when we contrast the Thirty Years' War with the Franco-German war of 1870. It is seen when we view the German educational system, and the influence of this the world over.

II. ITS INCLUSIVE RELATIONS.

But when looked at in relation to the moral and religious element in education, the whole question becomes dwarfed and partially solved. That education is of the most practical value which has the most real morality and religion in it. By making education more moral and religious we make it more practical, more supremely and universally valuable. The first element in every really practical education, is the distinctly Christian one. The most practical of all values is that which af-

fects the philosophy of life, and exalts the conduct of life. Liberal education gains the day in proportion as it is shown that various kinds of knowledge have a moral and religious worth.

Herbert Spencer makes a long discussion of the question of what kinds of knowledge and what activities are of the most worth and arrives at the following classification:

First, those which minister to self-preservation, directly or indirectly, as knowledge of physiology, disease, and the laws of health.

Second, those which have for their end, the rearing and discipline of offspring.

Third, those which are involved in the maintenance of proper social and political relations.

Fourth, those miscellaneous activities which make up the leisure part of life, devoted to the gratification of the tastes and feelings.

First, existence, then, offspring, then, comforts, then, pleasures, this is the order of value in which he would place human knowledges and activities. He would assign the same order of importance to them in education and lay proportionate stress upon the sciences which relate to them, and regard these as forming all of education. But, one form of activity, one form of knowledge, may include many others in the most intense way. The best way to achieve them all, may be to achieve this one intense inclusive form. The best way often to make a farmer is to give the man a love of growing

things, a feeling that is both moral and esthetic. This will include and develop knowledge of the methods and conditions that will produce the best growths. The gardener who really loves roses, will learn all about soils. The woman who desires beauty, will often strive most earnestly for health.

In this inclusive way is religious and moral education related to all other elements of culture. He whose soul is most truly religious, will be the one who will find life the most precious, and will search out the means of preserving it; he will strive to train and develop the best offspring; he will do all in his power to make life full of pleasure and comfort for all his fellow creatures. Religious education thus including all other elements of education so supremely as in a measure to make them indifferent to order, clearly rises as the first element in education.

III. VALUE INCREASES WITH AMOUNT.

Its supreme importance is also seen in the light of another fact. The demand for moral and religious qualities and the field for the application is illimitable, while overproduction in almost every other line of work is possible and usually unavoidable. It is easy to flood the country with civil engineers, typewriters, even physicians and lawyers. The cry is raised in Germany that there are too many highly educated men. In literature also, it is a question whether too many, even of what are called good books, are not being written. The accu-

mulation of pure facts even at last ceases to be valuable.

Astronomers having discovered over three hundred asteroids found it necessary at one time to let some of them drop back into the unknown. Especially is it true that a limit is soon found to the number of individuals, that can be profitably educated for any technical or so-called practical occupation. All further increase in the number so educated, diminishes the value of this education for those possessing it. So able a man as Herbert Spencer, educated as a civil engineer, left his profession because it became overcrowded. But with moral and religious values it is very different. Every gain in love and faith and reverence, which the world makes, gives a new value to that which it already possesses. The best manhood and womanhood in millionfold abundance, would but make each unit more valuable and fruitful to all the rest.

THE ABSOLUTE VALUE.

Nor is it to be forgotten that in all these ways we but catch glimpses of the deeper, transcendental value of religion. In time a conception is formed of that value in it, which is absolute. A love for it arises, which asks no causes or reasons, and never thinks to compare.

CONCLUSIONS OF EDUCATORS.

From whatever standpoint we look at the ques-

tion, we therefore arrive at the same conclusion. Hence it is that almost all great educators have agreed on religious education, including the moral, as the supreme element, the summation and goal of all education. With Comenius "the end of all education was the religious life as embracing morality, an end common to him with all educational writers of any value." Ratke said, "Begin everything with prayer. Consider everything by itself and yet in its relation to the infinite." Guizot said, "Popular education to be truly good and socially useful must be fundamentally religious." Such in substance was the opinion also of Milton and Locke; such is the opinion of the modern German school of pedagogy. Froebel forcibly expresses his opinion thus: "Only the Christian, only the human being with the Christian spirit, life and aspiration, can possibly attain a true understanding and a living knowledge of nature. . . . The school should first of all teach the religion of Christ. Everywhere and in all zones, the school should instruct for and in this religion."

The Commissioners appointed by the Crown, to examine the English system of education in 1886, report: "While the whole commission is animated by one and the same desire, to secure for the children in the public elementary schools the best and most thorough instruction in secular subjects suitable to their years, and in harmony with the requirements of their future life, it is also unanimously of the opinion that their religious and moral

training is a matter of still higher importance alike to the children, the parents, and the nation, though the views of its members differ as to the method whereby this object of supreme moment should be obtained."

Such being the position of the religious element in education, and such its relation to the other elements, it remains to consider the practical question of making it as effective a part as possible of a general system of education.

CHAPTER XI.

THE PRACTICAL PROBLEM.

IN all education, we have found that religious and moral culture is a fundamental factor. It may be made to tell with invaluable effect in the different, individual growth processes of the mind, as well as in physical culture, in the general culture of an adult people, and in the making of teachers. It holds the first place with reference to informal and systematic education alike. It is of supreme importance, both in itself, and as an aid to other processes of education. Hence it behooves men, wherever and however, possible to make religious education prominent and effective. It behooves men, wherever possible, in the home, the church, the church society, the Christian school, to unite secular and religious education, to develop each to the highest point, and make them as mutually helpful as can be. It behooves men, wherever religious and secular education are separated for any reason, to put the separated halves into as close and organic a relation as possible.

I. SEPARATED EDUCATION. RELIGIOUS EDUCATION ADAPTED.

If, as many think, it is best, or necessary, that

only the great body of secular education should be provided for by the state, and religious education be left to parents and church organizations, it is the duty and interest of all concerned to develop these two halves of education into the closest possible functional relations. Every parent should interest himself vitally in his child's religious education and try to early develop in him that comprehensive spiritual expansion, that conscientiousness, and that lovingkindness, which are of supreme value in themselves, and in relation to all other processes of development. He should do this in relation to specific subjects of instruction at school, as well as to life in general. Church organizations should act in the most definite possible relation to the life and work of the child.

To the attentive observer there is already discoverable in the United States, where separated education prevails, a tendency thus to develop religious education into closer functional relations with secular education. Organizations like the Christian Endeavor Society and the Epworth League, which have grown with such phenomenal rapidity, have general culture courses as a feature; they also call for religious work and action, directly on the principles of self-activity of modern education. Sunday-school work is being modified in the light of better secular educational methods. In many Sunday-schools normal classes have been established, in which teachers are trained and from which they graduate. Denominational colleges in

the United States have, from their inception, done an invaluable service, in training for the public schools, teachers full of a moral and religious spirit. Thus in our land, the outside religious forces seem to be developing themselves as a more distinct factor and half of education, and into functional relations with the secular schools. Every means of aiding this process should be utilized to the utmost.

SECULAR EDUCATION ADAPTED.

In another foremost country, France, separated education also exists, the state providing for the secular part of the course, and leaving the religious part to parents and church organizations. But in France the state fully recognizes the organic relations between the two parts. Thursday of each week is "given as a whole holiday in order to have children taught in the religion to which they belong, outside the precincts of the school." The government goes still further in its recognition of the relation of religion to the schools.[1] "During the week preceding their confirmation [first communion], the teacher will allow children to be absent from school, even during regular school hours, in order to enable them to perform their religious duties and attend church if necessary." Thus the government in France seems to be putting the schools into functional relations with religion as an outside force, while on the other hand in the United States, the outside religious forces seem to be

putting themselves into such relations with the schools.

Not long ago Lyman Abbott published an article in the Century Magazine[2] entitled, "Can a nation have a religion?" In this he shows, quite apart from the question of the union of Church and State, in how many ways the political organization is dependent on religion, how many governmental questions are, in controlling essence, Christian questions. He suggests that though a formal union of Church and State is impossible, it is yet possible for the State to recognize and foster religion in general, as a constructive force, with far reaching beneficial results. One application of this would be for the State to do all in its power to keep the schools in effective functional relations with the religious forces of the land. If this be done in every practicable way, good results must follow.

But it is a question whether religion, as a part of separated education, can be made effective in the highest way. If religious education is to be made fully efficient in other growth processes, it should be carried on in direct connection with them. If the spiritual is the supreme element in culture, it should have the very best teachers, whereas, in separated systems, it must often be handed over to those who have little fitness beyond good will and earnest desire. It should be made effective in every life, while in separated education, where the religious half is left to voluntary effort, many do not get it at all, and very large numbers, in no true

sense. Is religious education capable of a more vital and fruitful union with secular education?

VALUE OF A CLOSER UNION.

Often men, seeing the intimate relation of all the great constructive forces in the world, and the immense advantages that apparently would result, if these agencies could be united, have dreamed of a great universal kingdom, where religion, political forces and education working efficiently together would transform the world.

Men of action have at times tried to bring this kingdom into actual being. Pope Leo the Tenth aimed to unite all secular governments under the ecclesiastical dominion of the church of Rome. Louis the Fourteenth of France attempted to make the state supreme, and to have a single uniform religion united with but subordinate to it. But all union of church and state in the past have resulted in evil. Instead of the church vivifying and purifying the state and acting with and for the church to give broad and energetic application to its powers as was intended, the state too often has become a mere instrument in the hands of a selfish hierarchy, and the church itself has relaxed into formalism and frequently into corruption. Must something like this be true also in the relation of secular education and religious education? Are these in practice better managed apart, however great the apparent advantages of uniting them? Or do we find here the true, the correct beginning of that

Kingdom of God, which has been not only dreamed of, but predicted? Is this the first healthy place of union of higher constructive forces? If this union be rightly made will the way open to others? Have previous attempts been made too clumsily, in too gross and massive and concrete a way? Is this a place where union can be made in essence, whence we can feel our way on in essence, and finally arrive at a fruitful combination in essence, if not in form, of all the higher constructive forces in the world? It is with deep interest that we scan the various efforts that have been made to bring together religious and secular instruction, in a mutually beneficial and creative union.

The various methods by which religious instruction has been incorporated as a part of a general scheme of education, may be grouped into three classes, the Sectarian, the Semi-Sectarian, and the Unsectarian but Religious.

II. SECTARIAN EDUCATION.

By sectarian schools we mean those directly and completely under the control of some church organization, as are denominational schools and colleges in England and America, as were the schools of France before 1870, the schools of Sweden for several centuries, and as have been the Jewish schools and schools of the Jesuits in all their history. In these, many forms of control by religious organizations appear, but the principle

involved and method represented in all are essentially the same.

A PROTESTANT EXPERIENCE.

The schools of Sweden are, in particular, a representative instance. This school system, like that of Germany, is one of the fruits of the Reformation. Born of the church, it has been under the direct charge of the church from its inception. Within the past fifty years the state has assumed some control, and each school district now elects a school board, yet this "board is under the control of the church authorities and merely acts as executive of the consistory." A recent proposed removal of the bishop from the control of the high schools of his diocese, aroused so much opposition that the "latest advices would indicate its non-acceptance by the people." The nature of the religious instruction formerly given in Swedish schools, was largely determined by a law promulgated by Charles IX. in 1686, "that no person should marry unless he could repeat Luther's catechism and had partaken of the Lord's Supper." In the schools established by the peasants to fit themselves to meet this catechism requirement, "the text books consisted of the primer, the smaller and larger catechism, and singing books." The plan of direct, dogmatic instruction has been continued to the present, though the results have often been far from satisfactory.

For instance we quote the following from Pro-

fessor Austin Phelps[3]: "It appears that it was a feature in the organic law of Sweden, that the schools should teach all the youth of the kingdom the Lutheran catechism: as the Swedish pastors termed it, the schools should 'teach religion' to the children. Accordingly every Swedish child of suitable age was 'taught religion' by catechetical drill supervised by the pastor of his parish. Probably there was not then, if there is now, another country on the globe where this duty was so scrupulously attended to as there. But, at the time referred to, the complaint was universal among the clergy and the thoughtful laity of Sweden, that the vitality of the old faith was dying out. In hundreds of parishes the youth droned the catechism as a necessity to their civil standing in after life; but the ancient faith was no longer breathed in the ancient form."

"Side by side with this admirably compacted system of catechetical routine, there sprang up an obscure sect of 'Lascari,' as they were termed; that is, 'readers,' as I understand the title. They resembled in spirit the Methodists of England. They derived their name from the fact that their religious teachers, with no ecclesiastical *status* recognized by either Church or State, were simply readers of the Bible. They erected plain meeting-houses, like barns, to evade the law of the realm against the unlicensed erection of churches. The people forsook the old temples of their fathers and flocked in thousands to the cheerless barns of the Lascari, to hear the Bible read. . . . Some of them journeyed

from ten to sixty miles for the purpose. Many gave evidence of spiritual conversion." Here we have plainly indicated to us, all the better perhaps because it is in a Protestant country, that mere formal denominational instruction in the schools is not, of itself, enough. The whole subject of religious instruction in the schools was thoroughly debated by a convention of Swedish teachers in August, 1888, and as a result it has been decided, while diminishing the number of hours of instruction, to make the study less dogmatic and more Biblical.

In the experience of Sweden we fairly see indicated the strength of the system of sectarian education, its weakness, and also the tendency or direction of development into something better. However distasteful it has been at times to the people, there can be no doubt that it has been an efficent factor in keeping the people of Sweden, from the time of the Reformation to the present, pure and strong in religious belief, and in moral life; it was this very system, perhaps, which made the "Lascari" possible. It shows the danger that, when a church is in control of schools, these schools be made only narrowly effective for direct and immediate uses of the church as an ecclesiastical organization, rather than broadly efficient for the life of the people; the peril that religious instruction itself die down into narrow formalism. The direction of needed development is also shown in the tendency to make religious instruction in the

schools more purely and directly Biblical, leaving more to the individual conscience, and thus furnishing the mind with material which the church can use in systematic and exact ways, crowning it with catechism and creed if it desire.

A CATHOLIC EXPERIENCE.

These results which an examination of the case of Sweden has given us, are confirmed and further illustrated by other instances. In the general renovation which France has given herself since the downfall of 1870, every ascertainable source of weakness has been searched into and remedied. A new education has been decided upon, as a first step toward a new France. One conclusion arrived at was that the inefficiency of the schools before 1870 was due to the domination in them of the Catholic priesthood, and that "the preliminary condition of all progress was the secularization of education." Priestly education had perhaps been efficient, but it had become a narrow efficiency for the material interest of the church. The great question had become, "whether the priesthood, or the bulk of the people, shall have the dominating influence over popular education." It was felt that the first thing to be done to "enable France to resume the march onward which was begun by the revolution of 1789" was to "secularize the schools," perhaps too absolute an expression. By it was meant, rather the exclusion of the priests, than the exclusion of all religious provisions. All

teachers must be laymen, but the child is to have full moral instruction, and careful specifications with regard to the scope and details of this instruction are given. It is to be noted that the inculcation of duties to God is included in it. More than this, as we have already stated, specific religious instruction outside the schools is recognized, and the schools put in some organic relation to it. But as a whole the experience of France previous to 1870 illustrates the unsatisfactory nature of sectarian education.

OTHER INSTANCES.

The recent attempt of the German government to establish sectarian schools shows us how thoroughly convinced the German people are of the unwisdom of such a course. As a result of the policy of Frederick the Great, in all schools for nearly a century, moral and religious instruction, chiefly by the schoolmaster, has been compulsory; in fact one of the chief aims has been the religious and moral development of the pupil. But this was to be Christian, non-sectarian education. The Prussian government proposed in 1891 a law,[4] by which to substitute sectarian schools for this system. It provided that, "in the organization of elementary schools, sectarian considerations are to be regarded as far as possible. As a general rule every child shall be taught by a teacher of his own sect." "New elementary schools shall be organized on a sectarian basis only." "When it happens that in any

school of a particular sect, there are more than thirty children of some one other sect," a separate elementary school shall be established. There were numerous other provisions in development of the general principle. But, as all remember, the result of this proposal was a storm of popular dissatisfaction which shook the German throne, and annulled the attempt.

The Jewish system of education was and is efficient, but only narrowly so, and is rejected by the world at large. The Jesuit system attains much of its purpose, but not in a way generally helpful to mankind. Both show the extraordinary value of religion as a factor in education, but they do not show how to make it useful to the world at large, when thus used. On the other hand sectarian and denominational schools and colleges in Great Britain and America do show, in suggestive ways, how to make religion effective in the general educational life of the world. They make clear that schools, where religious education is included as a part of general education, are broadly efficient in proportion as they are liberal and teach the essence of the Christian religion, rather than denominational technique.

For instance who can easily measure the valuable and even splendid work done by the American denominational colleges? Who can measure the work done by the New England colleges in the late civil war, and in the formation of the higher life of the great West? How is the higher moral and

religious life of the nation at large, diminished, if we subtract from it, the influence of all denominational schools! This extraordinarily broad and healthy influence has been largely due, as we have indicated, to the liberal nature of the religious instruction given in these institutions, followed up as it has been by earnest special instruction in the churches themselves. Denominational lines have not been so strictly drawn in sectarian institutions, but that Methodists have attended Presbyterian colleges. Presbyterians have been educated at Baptist institutions, and Catholics in Methodist schools. Even Princeton, while maintaining her sturdy theology, has made her formal collegiate instruction so liberal, that individuals from all other principal denominations have come there to be educated. It may be that the largeness of the number of denominations in the United States, and then early equal strength of the leading ones, have prevented any single one from obtaining an unwholesome predominance, and have tended to liberalize them all. The great mass of non-sectarian education interfused among them, may have helped to the same end. At any rate the fact and its result are evident.

Everywhere then in sectarian schools, we perceive, on the one hand, the extraordinary power of religion as a factor in education, and on the other hand, the difficulty in making strict sectarian education broadly efficient, but that denominational instruction does become broadly efficient and satis-

factory in proportion as it becomes a teaching of the underlying essence of religion and morals, and leaves the rest of religious instruction to private and church agencies.

III. SEMI-SECTARIAN EDUCATION.

The second method of giving religious instruction in connection with ordinary school teaching is what may be approximately termed the semi-sectarian. By this is meant sectarian teaching under special or limited arrangement, as either before or after the regular school hours, or during school hours, allowing pupils, whose parents so desire, to withdraw. Religious and secular education are thus in semi-union; separated in time, yet carried on in the same place. They are superposed but not interorganized. About twenty years ago, the Board of Education of the city of Poughkeepsie assumed control of two large parochial schools in the city under the following conditions. The city paid a nominal rent for the buildings, took entire charge of the appointment of teachers and of the courses of instruction, and thus virtually placed city schools in the buildings. The city, however, allowed the Catholic church to use the buildings for its own purposes outside of school hours. Thus it was possible for the church to have Catholic scholars remain after school, and to give them religious instruction of such nature as it desired. Another similar instance which has attracted attention throughout the country, and filled educational

journals with discussion, is the Stillwater-Faribault case in Minnesota.

In the schools of some sections of Canada, in some schools in England, and in other parts of Europe, sectarian instruction is permitted under similar arrangements. The most notable case is that of England. In the school laws of that country are elaborate provisions for religious education. Sectarian education is possible but children are allowed to withdraw while it is being given. The times of religious instruction in such cases must be at the beginning or end of the regular school hours, and these hours are to be "inserted in a time-table, to be approved by the education department . . . and conspicuously affixed in every school room; and any scholar may be withdrawn by his parent from such observance or instruction without forfeiting any of the other benefits of the school." But while sectarian teaching is thus possible, it is not to any degree practiced. In the board schools, which are those most closely corresponding to our public schools, and hence most truly representing the "real attitude of mind which Englishmen hold toward religious instruction," out of over twenty-two hundred schools, less than one hundred have religious instruction on this basis, namely, denominational teaching "allowed under special agreement," while nearly two thousand have undenominational religious instruction or observance of some sort.

It is further clear that the same causes which limit the efficiency of separate education, limit that of semi-sectarian education also. The relation of the religious to the other elements of education is so intimate, that they should be combined as thoroughly and organically as possible. But semi-sectarian education combines them no more vitally than does separate education. It is also of importance that the teachers, who give the rest of the instruction in the schools, should be the teachers of Christian principles as well. As the religious element is the most important, every principle of pedagogy, every fact of experience, every fiber of accumulated power, should be brought to bear in instilling it. The commission appointed in 1886 to investigate the English system of religious education reports, that "it is of the highest importance that the teachers who are charged with the moral training of the scholars should continue to take part in the religious instruction, and that any separation of the teacher from the religious instruction of the school would be injurious to the moral and secular training of the scholars." In semi-sectarian and sectarian education alike, we thus find a tendency toward unsectarianism in religious instruction given as a part of the general education of the people.

IV. NON-SECTARIAN BUT RELIGIOUS EDUCATION.

The third method of giving religious instruction in public schools, is that which is unsectarian but

religious. Recognizing the supreme place of the religious element both in itself and as a factor in all the rest of education, it is the aim to include it in general school education, yet to include only that part of religion which is common to the teaching and belief of all denominations. For example, the principle underlying such instruction in the Prussian schools since 1799 is, "that instruction in religion in these [the people's or public] schools should confine itself to the general truths of religion, and the morals underlying all church parties; in other words, it should be Christian, but non-sectarian."

In the board schools of England, there is a clause forbidding "the teaching of any religious catechism or religious formulary which is distinctive of any particular denomination."

But while the aim in both these systems is thus non-sectarian, the desired ideal seems to be but imperfectly attained in actual practice. In Prussia the ground covered by religious instruction is "biblical history, the catechism with Bible verses, the memorizing of hymns, the essential points of Christian ethics, and the creed." On the one hand, this instruction, including as it does the creed and catechism, does not appear to be truly unsectarian, and we are prepared for the further statement that "Protestants, Catholics and Israelites are, as much as possible, taught in separate schools. Where they attend mixed schools, they are separated during the lesson of religion."

On the other hand, the undenominational religious instruction given, covers only "biblical history" and "essential points of religious ethics," and is therefore so limited that it cannot be said to be a truly comprehensive and suggestive essence of the common basis of all sectarian teachings. If we examine the scope of the religious instruction given in English non-sectarian schools, we find a great range of difference. In a great number of them, the Bible is read without comment, and perhaps hymns are sung and prayer offered. Where there is distinctive and more aggressive religious instruction, we find that much work is done in biblical history, in memorizing passages of Scripture; the doctrinal instruction includes learning the Lord's Prayer, the Ten Commandments and the Apostles' Creed. In neither of these cases do we find any thorough systematic effort to cover the facts of religion, what we may call the study of descriptive religion, nor yet to work out and instil that common fundamental essence which underlies all religion.

Crude and undeveloped as this method seems, in comparison with the thorough, scientific instruction given in some departments of work, it yet has produced important results. The value of it is keenly appreciated by the German people. Skeptical as is the scholarship of Germany, as a body the people are deeply and instinctively religious; they are full of an implicit religious feeling. The value they attach to the system in use among

them is clearly shown by that storm which arose, when a change toward sectarianism was suggested, almost as if the Fatherland itself had been assailed.

The results in England are also valuable. The Royal Commission, before mentioned, reports that "greatly as the estimate of the value of the religious instruction given in the board schools varies with the standpoint from which it is regarded, there is good ground for concluding that where care is bestowed on the organization of such instruction, and sufficient time is allowed for imparting it, it is of a nature to affect the conscience and influence the conduct of the children of whose daily training it forms a part." President Sharpless of Haverford College who has examined the English system and written upon it, pronounces the religious feature on the whole successful. The United States Commissioner of Education, speaking in general, says, "While the average intellectual standard of the English elementary schools (if both urban and rural schools be included) is not high, the moral quality is positive and pervasive. This is a very natural consequence of the part which the Church has taken in the establishment and maintenance of the schools. It is further attributable to the influence of the training colleges, through which the majority of the head teachers have passed, which colleges being denominational schools are deeply penetrated with the religious spirit. The attitude of the government accords with this spirit."

It is much then to know that Germany and England, the two leading nations of the world, perhaps, the one the most powerful on the land, the other on the water, the one predominant in the intellectual world, the other in the commercial world, that these leading nations are deeply impressed with the value of the moral and religious element as a vital part of all education, and that they esteem Christian public education as more valuable and feasible than the sectarian form, and that they have obtained valuable results in the practical application of their opinions. But it is not less important to notice that these results are not as far-reaching and profound as the pre-eminent nature of religion would lead us to expect, if it were rightly and fully applied, and that apparently we have in the experience of these peoples only glimpses of the results that should be obtained in any adequate solution of the problem. At the same time, we notice that few if any thorough and systematic efforts, on a broad practical scale, have ever been made to work out and state and teach the vital and comprehensive substance of denominational teachings; to determine one that is not only safe and satisfactory but also full of the utmost aggressive power.

If only separated education is possible, the use of this common essence will be of great importance in bringing the religious half into more vital relations with the secular half. But if we go farther, and make religious instruction a part of general education, the use of this general essence will be necessary and indispensable.

CHAPTER XII.

THE SUBSTANCE OF RELIGION IN EDUCATION.

AN AGGRESSIVE SUBSTANCE.

FUNDAMENTAL then in any broad, adequate solution of the problem of bringing the religious element efficiently to bear in the general education of the world, and of making it everywhere the most effective and productive element in education, is working out a certain underlying essence or general substance of religion. This essence, while not sectarian, should be that on which the religious teaching of each denomination is based, and should be capable of being developed by each denomination into its own particular form. It should be not merely safe and satisfactory, but also rich, fruitful and full of aggressive power. It must not only be full of higher power, but also touch the general and material life of the people at every possible point.

Almost all of the practical attempts which have been made to determine and use this general substance of religion, have been rather in the line of paring down existing doctrines to a residuum so small and general as to be commonly acceptable, rather than in the direction of searching out an essence, which can be developed and extended, and

which, while including the essence of the best doctrine, comes in aggressive contact with all life. They have been more negative than positive in their nature. Thus in German schools, the unsectarian substance consists, as we have seen, of certain limited parts of the catechism; in English schools, it is confined to the Lord's Prayer and Apostles' Creed. If we go to Thomas Arnold, perhaps the most successful of all those modern educators who have tried to make religion effective in general education, and read his sermons and letters and the statements of his pupils, it is remarkable how few we find of general principles of religious truth, which others can transfer and use in their educational work, how few illustrations and methods of religious instruction which are definite and yet generally available. Yet as a result of the various practical experiments that have been made, and in the light of the large amount of discussion of the problem in recent years, and in view of the progress which denominations have made in fraternal spirit, and in the recognition of the value of that common basis of religious fact and feeling which underlies the various sectarian teachings, it seems possible to construct a more extended, aggressive and flexible essence. Certain features of it at least seem evident.

A. A FIRST ESSENCE.

I. A COMMON FACT AND ACT.

In the first place, a certain fundamental fact is

common to all religions. There is a recognition and a union of the life with vast external Power, known or unknown, or but partially known. All men are to some extent religious. The use of this fundamental religious fact is the basis of all life. All men who live on and work, to this extent recognize this Power and to this extent are religious. Men who use this fact reluctantly, and in the most limited way possible, from whatever misconception, are those whom we call irreligious; but all lives must necessarily have some use of this religious fact as a foundation stone. Religious souls, however, use this fundamental fact as universally and intensely as possible, so as to make it as fruitful as possible. In the power to do so, its possessors recognize their most precious endowment.

II. COMMON FEELING.

In the second place, there is a certain fundamental feeling common to all religious life. Reverence, adoration, spiritual love have in their essence no contradictory species. Even if they differ in some form of outward expression, they fit together essentially. A contemplation of vast external Power in its various blessed values, and the union of the life with it arouse the same emotions everywhere. These same emotions carry all denominations forward in their utmost development of creed and ceremony. The same fundamental religious fact is surrounded by the same glow of deeply realized value.

III. COMMON ACTIVITIES.

In the third place, the practical religious conduct and activities of life are essentially the same in all civilized countries. Out of union with the vast, external Power, springs communion with it of some sort, an utterance to it in spoken word or in the silent language of the soul. Out of it spring the same practical duties and privileges in the world about us. Christianity at work is the same in Scotland and in America. The sisters of charity and the Christian Commission did the same work in our civil war. The converted African and the converted Hindoo gladly enter upon the same broader range of usefulness. In action, there is but one fatherhood of God and but one brotherhood of man.

Thus all forms of religion and of life itself are based on one fundamental fact; all denominations are carried forward to their utmost development of individual details by the same general emotions; all forms of religion, worthy of the name, manifest themselves in the same species of practical activity. It is thus possible to distinguish a common essence in all forms of specific religious teaching and work. It also seems clearly possible to give aid in the schools in imparting this essence practically to all who desire any religious training. It seems feasible to impress the fundamental religious fact, to cultivate religious feeling, to develop religious action with offence to none and value to all really beneficial organizations, and with immense fruitage in the general life of the people.

USE OF THE FIRST ESSENCE.

Whatever aids the mind to appreciate the fact that values exist in unknown or partially known forces is a preparation for the apprehension of the fundamental fact of religion. A writer in a recent number of the New England Magazine,[1] in discussing the question whether religion or a preparation for it can be taught in the public schools, makes a distinction between describable knowledge and appreciable knowledge. Describable knowledge is that which can be stated in definite terms. It can be analyzed and expressed in terms of the analysis, the laws of falling bodies being an example. Appreciable knowledge is that the value of which is felt but cannot be definitely explained or stated, as is often the case with noble or heroic action. He shows that the power to appreciate unanalyzable knowledge is in children, and that the cultivation of it develops idealism and puts the mind in the right attitude to assimilate spiritual truth and develop religiously.

He next mentions the profound influence in his own life of a stated hour given, by a teacher in his childhood, to the idealization of the characters of pupils, by informal readings and discussions of English classics. His experience was that "to read of such a perfect gentleman as Col. Newcome gives one an impulse to be a gentleman. Being a gentleman is more enticing to a boy for a season than being rich." Under the influence of the noble pictures found in literature and the inspiration of

the best poetry, feeling a charm which they never thought to analyze, boys experienced the stirring of higher emotions, and were moved to speak, and later on to act. Here we have appreciation of noble influences, not needing or capable of analysis, we have higher feelings aroused and action developed into spontaneity. All such culture is a preparation for religious training, in fact it is an adumbration of training in the general substance of religion.

But why should not this substance itself be thus taught? Why should not the child be brought to appreciate the vast unlimited Power that makes for righteousness, to feel a deeply reverential yet familiar and personal love for this Power, and to speak and act in accordance with this knowledge and feeling? This would give that common basis on which all specific religious agencies work and that general material which all use, and in so doing would perform a valuable service to the church and world alike. Every one acquainted with children must have noticed the deeply religious vein in them. Educators have made mention of this again and again. As one of them expresses it "The child lives in a world . . . where faith, hope and love beckon to realms of beauty and delight. The spiritual and moral truths which are to become the very life-breath of his soul, he apprehends mystically, not logically. Heaven lies about him; he lives in wonderland and feels the thrill of awe as naturally as he looks with wide open eyes. . . . He wants to feel that he is the child of God, of the

infinitely good and all wonderful." Compayré tells of a father,[2] who, impressed by reading Rousseau's Emile, and by the statement that children were not sufficiently developed to be taught religious truth till they had reached the age of eighteen, lived in seclusion with his son and brought him up so that at the age of ten the boy had neither read nor heard the name of God. "But then his mind found what had been denied it. The sun which he saw rise each morning seemed the all powerful benefactor of whom he felt the need. He soon formed the habit of going at dawn to the garden, to pay homage to that god that he had made for himself. His father surprised him one day, and showed him his error by teaching him that all the fixed stars are so many suns distributed in space. But such was then the disappointment and the grief of the child deprived of his worship, that the father, overcome, acknowledged to him that there was a God, the Creator of the heavens and the earth." As Froebel has said, "We do not give early boyhood enough credit for religious power as well as for mental power generally."

Very young children have no keener delight than in hearing stories containing religious truth which they can assimilate in their own way, in asking questions relating to such subjects and expressing their own religious ideas and feelings generally. But, too often, the child, finding himself not understood and even ridiculed, at length ceases to speak and act in a way to attract notice, and thus comes

to hide and stifle his most precious feelings. Given influences which, instead of suppressing his powers, will carry him on to an ever clearer appreciation of things not seen, an ever fuller expression of religious feeling, and an ever more earnest action, who can measure the value to himself and to the world?

Given a teacher who from long and wide experience thoroughly understands young and tender religious natures, and can feed them with the right material and encourage them into right expression, who will not be benefitted thereby? Froebel gives instances of the religious development of little children under such influences, and all who have had opportunities of observing these influences at work in wholesome and adapted ways, must have observed valuable results both in individuals and in companies of children organized together.

The writer knows of a boy of naturally perverse temperament, but who had the tendency common to children to talk on religious subjects when not discouraged therein, and who after many such talks said decisively one day, though yet little more than four years of age, "I am going to be a good boy now," and whose character was entirely changed thereafter. Froebel tells of a boy who, scarcely six years old, asked every evening of his parents taking him to bed, "Please teach me a prayer," and traces how from this his spiritual nature was developed.

An interesting article recently published in the Century Magazine[3] gives the experience of a teacher

in the moral and religious training of the "Bad Boys' School." This was a school in New York City composed of about one hundred boys, most of whom had been expelled from Sunday-schools as incorrigible. To encourage the work done in this school, a friend of the teacher offered "prizes for those boys who could report a certain number of good, or kind, or noble deeds, which they had themselves witnessed, or heard, or read about, either at the present time or in past history." The object was first, to see what in the mind of each "constitutes a truly brave and noble action," and second, to "train them not to find it in warlike or showy deeds, but in acts of loving self-sacrifice often never known or recognized, in little ways of kindness and self-denial." The success of the method was extraordinary. The teacher reports, "I am gaining a valuable knowledge of boy life and boys' needs that I never dreamed of before." When the time came for reading the records of noble deeds collected by various members of the school, such was the interest that "most of the boys crowded around my feet, some climbed into the timbers and braces above me." "To my surprise, the first prize, a good watch, fell to a boy who last year was taken by my sexton by the scruff of the neck—a ragged, bare-footed boy—and landed off the church grounds, and bade never to come back, he was so troublesome." Many of the "records" telling stories of Sir Philip Sidney and Sir Ralph Abercrombie and John Maynard, and like incidents observed in the

daily life of the narrator, showed a true moral feeling and appreciation of nobility. What was more valuable still, the very act of collecting and narrating these deeds, had aroused into activity the better nature of the boys, as was made evident by quaint moral reflections and exhorations, interspersed or appended.

This somewhat isolated case seems to be an example of the way in which both the moral and religious natures of children can be developed in essential, fundamental respects. As the child becomes able, let him collect instances of intense spiritual life as well as of elevated moral conduct. Let other instances be set before him so as to stimulate him to emulation of them. Moral and religious instruction of this kind in some limited way is often given in kindergarten schools. Its value as so given is forcibly shown in such instances as that of San Francisco, where of nine thousand children taken from the criminal and poverty-stricken quarters of the city, and "who have gone through the free kindergartens of the Golden Gate Association, but one was found to have been arrested after careful inquiry and years of watchfulness over police-court, prison and house of refuge records." Because its spirit thus fits in well with early moral and religious instruction, the kindergarten is being adopted as the first stage in mission work, as at Beirut, Syria, and in India, and is found to be most effective. If preliminary instruction moral and spiritual in tone and essence is thus valuable in specific re-

ligious work in foreign lands, why not in the home land also? If a limited and accidental essence is thus valuable, why should not a carefully understood and thoroughly applied essence be still more valuable?

B. ESSENCE DEVELOPED INTO SUBSTANCE.

We thus find that a certain primal fact, and a certain common feeling and practical activity constitute a general first essence of religion, and that important results are obtained by its use. But beside this first essence, a further essence is possible. The first essence may be developed into a more general substance of religion. In the child the fundamental fact and feeling and action are not definitely separated. The religious perception and the glow of religious feeling dwell together in the soul, forming this first essence. But as the mind matures, the elements of this primal essence may be separated. Each element may be used and re-used to the utmost, the values of each may be seen more and more definitely in all aspects, each may be applied more widely and precisely. All may be combined to form a fuller, richer and more comprehensive substance of religious life and thought, which each denomination and each individual can clothe upon as it or he sees fit.

DEVELOPMENT OF THE FUNDAMENTAL RELIGIOUS ACT.

For instance, the fundamental religious act may be separated from the fundamental religious feel-

ing. It may be analyzed and extended. In all its new values, it may be converted into a fuller and richer religious feeling, and into more productive activities.

I. IT IS THE SIMPLEST ACT.

This primal religious act is seen to be the simplest act of the soul, and one of which all are alike capable. Loving is by comparison a rare and high-wrought mood of the soul. Belief, direct union of the life with vast eternal power, requires no complex-acting and powerful mind; indeed, to some extent it is a property of all minds in spite of themselves.

II. THE MOST FUNDAMENTALLY CONSTRUCTIVE ACT.

It is not only the simplest, it is also the most fundamental constructive act of the soul. It is the indispensable basis of all other goodness and growth in this goodness. It is stimulative of all those higher processes which make life complete and enduring. It is like breathing, simple and easy, yet the basis of all the vital processes. The effect of it is well shown by Paul in the 5th chapter of Romans, whether we regard the description as a part of natural or revealed religion. "By faith, we have peace with God, through our Lord Jesus Christ." Thence we have access into grace, whence result experience, hope, and "the love of God" "shed abroad in our hearts." In like manner in the 11th chapter of Hebrews it is shown

that various kinds of courage, moral, physical, spiritual, clinging, aggressive, all in their highest types spring from a free and full union of the soul with External Power.

The primal religious act is seen to have the same effect on bodies of men, that it has on the individual. Roman education at first had this essential religious element in it along with military fraining, and as a result, as Compayré expresses it, were produced " men the most robust, the most courageous, the best disciplined, the most patriotic that ever lived," but when in the time of Augustus religion had so died out amongst this people that they began to inscribe on their tombstones such words as, " To eternal sleep," " To perpetual rest," their civilization was doomed. English deism made Sir Robert Walpole possible. The Wesleyan revival made William Pitt and English dominion possible. A constant sterling faith has made Scotland great since the time of the Reformation.

III. ITS UNIVERSALITY.

Not only is this the most simple and constructive act, it is, in some germinal form at least, the most widespread in man's nature. It is a part of every useful power which man possesses. Activities so simple as eating and walking contain an element of faith-union with the External Power. To eat is to believe that the world will endure; to take a step is to suppose that the foot will find a

resting place. The same is true of all the other practical activities of life.

So also for the faculties and powers that make up man's inner being. Memory is based on the continuance and reliability of power outside of us. Reason makes all its calculations with reference to a stable future. It is acting in constant accord with external power. Imagination, departing from the seen, trusts in the unexplored depths and richnesses of diversity, that are in this same power.

The human hand has been justly admired as a marvellous instrument. It has been called "the most wonderful tool in any workshop. . . . No instrument devised by man compares with it for complication. It is a hammer, a vise, a forceps, a hook, a spring, a weight; it pushes, it draws in; the fingers alone contain elements of all the tools a sculptor requires in modelling. From the elbow to the digital extremities its movements are produced by nearly fifty muscles. So complicated is the cordage of a human hand that expert anatomists can hardly keep in remembrance its intricate mechanism. . . . . It is a wonder of wonders." But every joint and curve of the hand expresses union with the partially known, or the distant, or even the unknown. Its very complexity and perfection of organization only show how complete is that trust, and how thoroughly organized it is as a part of every practical activity.

The eye, not less richly organized, and moving

swiftly in all directions, is an example of how rapid and spontaneous this faith-union can be.

But hand and eye alike, are but instruments of the soul, the one for action, the other for perception. Their qualities are but a dim reflex of the qualities of the soul within. The completeness of their belief in and dependence on the unknown or partially known, is but a dim reflex of the universality of these qualities in the rest of the nature, that part which they obey; they visibly exhibit how widespread is the primal religious act in the whole range of man's being.

EXTENDED USE OF THE PRIMAL RELIGIOUS ACT.

If the primal act is so simple, so constructive, and so widespread, we see how important is the matter of developing it, so as to give man's nature a complete spiritual life. If it is a simple act, its development, being rightly undertaken, ought not to be difficult. If it is fundamentally constructive, its development ought to produce the most valuable results, in whatever area of the being it goes on. If the primal act is present, at least in some germinal form, in all parts of the nature, these results should be produced in every area, begetting a thorough and valuable organization.

If the fundamental religious act come to be realized in this way, and used in the most aggressive and complete fashion, its use will not degenerate into any mere utilitarianism, but will arouse a new and more personal love for that Almighty Power

which vivifies all, it will arouse a deeper sense of personal, absolute obligation; in other words, a deeper and fuller habit of childlike worship.

The mind also is not prejudiced for or against any specific form of religious worship, but is given a general preparation for all. A common culture of faith is bestowed, which the Protestant can complete into faith in Christ, or the Roman Catholic into faith-union with the church, or the Jew into faith in Jehovah, or the Agnostic into faith in practical action. We do not here surrender protestant Christianity as the complete and final form of religion. For we believe that the fundamental fact and act so inculcated will tend to extend and complete itself into the best final form. Having truly realized it even in an elementary way merely, men will try to perfect it into the highest fruitage of practical result and glow of feeling. Catholics and agnostics are as likely to be brought to realize the superiority of this form of religion and gladly accept it, in this way as in any other, where all take a common basis and build upon it side by side in minds unbiased, and yet eager to achieve the utmost benefit.

THE WHOLE DEVELOPED ESSENCE.

If in this or similar ways, the other elements of the primeval essence of religion, religious feeling, and religious activities, be also analyzed and wrought out and extended in all aspects of value, we shall obtain, as a result, a general developed

essence or substance of religion and theologies. All will be true of it as a whole, that has been said of the extended use of the fundamental religious act.

C. DEVELOPMENT OF A GENERAL IDEALISM.

I. GERMS OF IDEALISM.

Among material things and symbols there exist relations to the external, altruisms even. The sentence of the poet is full of strength because each word does not stand by itself, as in agglutinative speech, but has powerful relations with other words. Science progresses by adding outside forces and substances to a given material. The chemist joins heat or electricity, or new elements, to given ones, and gets his valuable laws of combination. In mathematics even, this altruism is the source of developing power. In Algebra in completing the square, outside quantity is introduced, and by its aid an apparently complex relation is seen to be but a simple one used in repetition. The same principle is illustrated everywhere throughout mathematics. Art is effective in proportion as it puts given material in union with a great external. The best art is full of touches of the infinite, whether these be vistas in a forest, a wide-winged sunset, or an eye full of fathomless meaning.

Particularly are all living, growing things joined with power which is outside of themselves and only dimly known. The more highly organized they

are, the more complete is their union with this power. The instinct of the migrating bird, grasps the Torrid Zone across the thousands of miles stretching between Greenland and the equator. The rich life juices of plants, packed into buds and bulbs in autumn, and ready to leap up and seize the warmth of spring, seems to lay hold of this springtime through months of cold and storms. The oak in midwinter is visibly grasping next summer's sunshine with its hundred bare arms.

Thus among material things, a certain altruism and a valuable relation to outside things and forces exist. There is also a tendency for these outgoing relations to extend and complete themselves. This suggests that these relations, when fully understood, may help supply a general idealism to our present vast stores of concrete knowledge. They may go far to furnish that ideal upper half which we have seen that the new education, as yet, in great measure lacks. If rightly developed, they may form a basis for that upper half of idealism, which our present material civilization also needs.

The growing materialism of the age is forcibly illustrated in the fact that for every two pounds of bread which the American people eat, more than one pound of iron[4] is assimilated into our civilization. In one of the towns of Pennsylvania is a steam hammer weighing 125 tons; its striking face is two feet broad and eight feet long. It rises and falls in a special tower. The huge mallet of 500 cubic feet of iron, drops not only by its own weight,

but is also thrust down by the direct propelling power of steam. Man seems to be making those tools and instruments which shall beat his ideals down into the earth. But all materials and instruments, when viewed in broad enough relations, are seen to be but parts of a general idealism. If all the iron in our mountains were spread out over the land as railroads and telegraphs and other solid structures, all would but form an adequate framework for the kingdom of God.

As soon as an object or a fact is considered in relation to the infinite it is idealized. Idealism is a wide grasping of forms and relations which are delicate and inclusive, yet steel-like in their reality; and, at the same time, a giving of due place to the unknown or partially known. The very essence of it then, is a recognition of the wide-spreading altruism, of the mutual organizing relations among symbols and things alike.

II. CULMINATION OF IDEALISM IN RELIGIOUS IDEAS.

Of especial interest is the relation of man to things outside of himself, culminating in his religious life. What is man in the presence of the very large and distant, without joining the telescope to himself? What is he in the presence of the very small, without the microscope? Civilization is being built up by a union of each life with other lives, and the action of all in connection with tools and forces outside of mankind. Newton confining his attention to the surface of the earth

could not prove the law of gravitation. But when he went out beyond himself so to speak, out beyond the world in which we live, and included the moon, and then the sun and the planets, in his contemplation, the law became clearly evident. Human progress ever consists of gaining valuable results by union of the near and immediate with the distant and foreign. The growth of the soul is but a union of it with a larger and larger external. Justice, courtesy, family affections, the various portions of the love called human brotherhood, are but stages in the process; all culminate and are included in a loving recognition of a divine fatherhood.

Here then we find an altruistic and spiritual law, beginning with simple concrete things and symbols, and going on to the highest forms of existence. It irresistibly draws the soul on, and culminates in its union with God, as an intense summation of the essence of all, and including and governing all other external. The soul rises and extends its existence till this becomes "a fervid life in God and with God, in all circumstances and conditions of life and mind."

III. IDEALISM AND RELIGION DEVELOP EACH OTHER.

Thus we find suggestions at least, of a general scheme of idealism, culminating in spiritual life. Beginning with limited and even mechanical externalism, it rises into altruism, and thence into complete religious life. On the one hand, religion is a

sublimated part of it; on the other, all its parts are but suggestions or details of religion.

Being so related, idealism and religion should aid in developing each other. Idealism prepares the way and puts the mind in the right attitude for religion. It is full of local altruisms and limited uses of unknown powers, and it exhibits numerous practical values flowing therefrom. By the multitude of its suggestions, it draws the mind on to grasp a higher spiritual life. First it suggests, then it typifies, and finally it manifoldly demonstrates.

On the other hand, the religious life, once realized, extends and develops idealism including in the latter the moral life. Justice, honesty, charity, and other moral laws are at once marked off as but separate parts or details of religion, and are instantly and emphatically demonstrated. All parts of the law of love are enforced into commanding certainty. Full of the religious spirit, the soul also perceives ideal forms and relations existing all about it, or creates other and new forms of these delicate but inclusive relations. Altruisms appear or are generated everywhere; altruisms among things, among symbols, among men; altruisms finite and altruisms infinite; human and divine altruisms, itself being but a supreme, sublimated altruism, the flower and fruit of all.

Not only should idealism and religion help create each other, they should help create the highest type of each other. Idealism enriches and

broadens religion, builds it up with supporting illustrations and proofs, fills it with details, opens new fields for its application. Reciprocally, religion prevents idealism from stopping short in any near area, either of things or of men; in any form of sensuous art, or crude philanthropy. It suggests an altruism that is never complete, but rather is full of ever new vistas.

Finally, as cannot too often be insisted upon, the effect of all should be but to re-inforce the original childlike attitude of worship. Idealism, by the multitude of its suggestions all leading the soul on to the fundamental religious state, by its final omnipresence, makes this attitude more constant. Likewise the more we develop and use the essence of religion, the more absolute its value becomes, the more transcendental its nature is to us, and the more childlike is our attitude in its presence. In all its practical values we realize that we have but the merest glimpses of its transcendental nature breaking feebly and locally into view. The more rational it is, the more wonderful also; the more practical, the more marvelous; the more of reason it contains, the more of mystery and promise. Its extended use, as well as the use of all forms of idealism, should lead to a profound, unquestioning faith; one that thinks not of causes and reasons, but on the contrary is as arbitrary and sovereign in all its relations, as are the laws of life and growth themselves, as they come sweeping out of the nature of God.

PRACTICAL ASPECTS.

I. ATTITUDE OF AGNOSTICS.

One of the two leading Agnostics of this generation says[5] "The great deeds of the philosophers have been less the fruit of their intellect than of the direction of that intellect by an eminently religious tone of mind. Truth has yielded herself rather to their patience, their love, their single-heartedness and their self-denial, than to their logical acumen." "True science and true religion are twin sisters." "Science prospers exactly in proportion as it is religious." The other of them quotes these remarks with approbation.

One of their followers writing in the *Educational Review*,[6] expresses a belief in the substance of religion and outlines a system of religious education which he regards as of the highest value. He desires that his child be taught "reverence," "faithfulness" and "faith" toward "that unknown reality which is the most real thing." Apparently then education in the primal essence of religion is regarded as desirable by agnostics so-called, and we feel that it will be of utmost value to them and the world. The religion which they profess, meager as it is, carried to its logical conclusion gives Christianity.

II. ATTITUDE OF DENOMINATIONS.

With respect to the Roman Catholic Church, as one writer has expressed it, "a movement is now

going on in the Church of Rome itself, under the guidance of Leo XIII., looking to the harmonizing of its practice and its teaching with the basic principles of our free institutions." If with its well-known, deep-seated conviction of the importance of a vital union of religion with education, the Roman Church can adapt itself to our present unreligious public schools, it surely ought to adapt itself to these in case they taught a general essence of religion. Cardinal Manning signed the report of the British Commission approving the system of unsectarian religious education in England. The Catholic schools in Georgia,[7] though public schools and under the joint control of both church and state, are opened with the reading of the English Bible and with prayer. The wonderful flexibility and late liberality of this church are forcibly illustrated in the two facts, that recently a famous Baptist divine preached from a Catholic pulpit in Newark, while, a little later on, a Catholic congregation in Long Island City heard mass in a Baptist church, their own having burned down.

It is true that when the New York Synod of the Presbyterian Church a few years ago[8] adopted a resolution urging the "incorporation into state and secular education of moral and religious truth, founded on the following basal propositions: a personal God; individual responsibility to him; immortality; a future judgment; and the Ten Commandments, as interpreted by the Sermon on the Mount," the leaders of the Roman Catholic Church

did not give their assent. To the committee which was appointed by the Synod to inquire as to "the practicability of securing a union of different denominations on such a basis," the Catholic Archbishop of New York replied through his Vicar-general, "We could be satisfied with nothing less than teaching our whole faith."

But it should be remembered that the Catholic Church is a very extensive and complex organization. It is partly autocratic, partly oligarchic, and partly democratic. The nature of this church has always largely partaken of the character of the country in which it has existed. In time, the popular element is sure to control in this democratic country. It is scarcely too much to say that it does substantially govern the church in this land to-day. In spite of the almost superhuman efforts of the Catholic priesthood, two-thirds of Catholic children are sent to the public schools instead of to the parochial schools, simply because their parents find that their children get a superior education in the public schools. If by incorporating the essence of religion in our system of school instruction a clearly better education results, there is reason to believe that the body of the Catholic people will assent to the change.

In this connection, attention should be again called to the importance of teaching an essence of religion which shall be, not merely satisfactory, but full of aggressive power. If people are merely not

offended, and no marked fruit is produced, a few jars will be likely to overthrow the system. But if the system be full of aggressive power, and yield a large fruitage, it will sustain itself not merely in spite of jars, but also against determined attacks. This would be true even with a united opposition. But in this country the clergy of the Catholic Church are not a unit. They are clearly divided into two wings, the conservative led by Archbishop Corrigan, and the liberal led by Archbishop Ireland. A large part of the hierarchy of the Roman Church has come to realize that the church must assimilate, or adapt itself to, every great upward movement, or disappear. The forces of modern civilization are too swift, dynamic and coherent to be resisted; rather, they are to be sought out and used as an aid. One of these forces is the best possible system of public education.

Protestant denominations are already fully aware of the value of such general education in religion. The Board of Education of the Presbyterian Church for instance, in its semi-centenary report to the General Assembly in 1869, says, "We do not want them [the public schools] to be sectarian, but we do insist that the Bible shall be read in them as the great text book of moral truth. The school committees and teachers should carefully select books for the use of children which will inspire pure morals, high motives and the fundamental principles of religious truth, which are the best heritage of a Christian nation."

That this opinion continues and has even strengthened and developed is shown by the action of the New York Synod of this denomination already referred to. As showing the breadth and depth of this feeling in other denominations, it is a fact of deep significance that representatives of the Jewish Church in New York, both in its orthodox and radical branches, endorsed heartily the general plan of the Synod stated above, taking some exception to the form of the last proposition only.

In teaching such an essence practical difficulties affecting the relations of denominations would doubtless arise at first. But we are the most practical people in the world, and notwithstanding the great number of our denominations and perhaps because of it, have more of truly fraternal religious feeling than exists anywhere else. All such difficulties should be overcome in the face of the immense value of the results to all forms of religious activity. Churches have flourished in all lands and epochs in proportion to the amount of general religious feeling and interest among the people. If practically all the youth in the land should receive so much and such kinds of religious instruction, as would prevent the concrete from becoming a substitute for religious feeling and lofty idealism; if practically all should obtain such a grasp of the vital essence of religion, as would prevent the individual while yet in youth from drifting back or being shocked by some superficial incident into skepticism, who can measure the value to every

form of religious activity. If in addition to this, practically all should obtain a general realization of the positive and aggressive value of religion, who can measure the value to the general life of the nation as well as to all forms of ecclesiastical activity?

Even if it be not possible for our general system of state schools thus to recognize and teach the essence of religion, it is possible for our denominational schools to teach this broader essence, and thus bring themselves into a more vital and effective relation to the life of the nation. Teachers trained in them, by their very spirit and attitude, would do a more efficient, elevating work in the public schools. The sooner this broad essence be first carefully wrought out and effectively taught in our denominational institutions, in a way satisfactory to those of varied beliefs attending them, and with recognized general power, the sooner it will come to be adopted by the schools in general. A field of most useful work here lies open before sectarian schools.

III. RELATION TO EDUCATION AS IT IS.

Wherever this broad essence is incorporated and rightly developed as a part of the training and culture of the young, it will supply the needs and advance the power of modern education in every desired way. It could be taught in connection with the various subjects of study, that is pervasively, as opportunity occurred. It would thus

supply that ideal upper half which the new education so often and so sadly lacks. By its aid, the spiritual worth of all knowledge would everywhere appear. It would show both the direct practical and the transcendental value of every true fact to be unlimited.

It could also be taught as a distinct part of the work, in an hour set apart with proper regulations. This hour would be given to instructive and stimulative talks, to the presentation of the results of observation, reading, and experience, and to the discussion of them; and at an advanced stage to strict text-book work also, on the essence of religion, the precise nature and scope of which would vary according to locality and many relativities, but which, we have tried to show, can be comprehensive and full of aggressive power under all circumstances. The Bible could be used as an aid in making clear and vivid this general essence of religion. We are sure that the more that it is used thus and in so far, the less general objection there will be to its employment. The instruction of this hour would form a final deductive, summation course for which all other courses and subjects of study would be but preliminary and desultory. Every part of knowledge would become related and applicable to every other part, and all parts would be reciprocally multiplicative. All after work and study becomes a mere filling in of details. As Froebel says, religious education gives to the matter of all education "a universal form."

"With religious education, which unites theoretical and practical education, by offering to the intellect the view of the first principle of the universe, and by offering to the will, a revelation of the divine purpose in creation as the ultimate guide for all practical action, education ends."

IV. RELATION TO THE WORLD AS IT IS.

This general religious instruction, cultivating the religious spirit in children, and giving them, as they mature, a grasp of the broad common-sense essence of all theology, would not only be useful in education but also of direct value to the world in its present stage of development. It would go far to make, or at least to enable churches, schools and all elevating influences, that are at present limited in their work, to make that higher transformation for which the world is now ripe, as we have attempted to show in the first chapter. In our own land and in many other parts of the world exists a deep appreciation of the practical value of religion, and such education would be fitted to take this appreciation and develop it into something higher and more intense.

Ex-Senator Ingalls, in a striking passage in a recent number of *Harper's Magazine*,[9] defines the attitude of the progressive business man of the West toward this vital subject. "Ambition and cupidity are the ruling passions in new communities. . . The concern for this world is much greater than for that which is to come. Religion

is conservative. The pioneer is radical. . . . His mind being inquisitive, its tendency is toward materialism and rationalism . . but he is reverent, tolerant, and devout. He recognizes religion as one of the great, beneficent forces of the universe, an indispensable premise in the syllogism of human destiny, without which society would be a sophism and the soul of man a fallacy." In other words, materialistic and rationalistic as the American mind may be on some sides, it keenly appreciates the fundamental truth and value of religion. At the Congress of Religions held in Chicago in September, 1893, the large and deeply interested audiences showed "a willingness to applaud any speaker who spoke with sincerity and eloquence on any subject. They have been quick to recognize the underlying principles which are part alike of all the faiths to which any great number of men are attached." In a recent powerful address before the Contemporary Club of Philadelphia, the view was expressed that Christianity has gone through three stages of development—the dogmatic, the ecclesiastical, and the evangelical, and has now entered upon a fourth stage, that of conduct, though in the last stage the essences of the first three are retained.

In all these views and facts, is expressed the prevalent but somewhat vague appreciation of the practical value of the main principles of religion. "There has probably been no epoch in Christian history when the best intellects were more deeply

interested in religious questions than now; when young men of early advantages and of education were more eager to know the truth," but this mere interest of itself results too often only in the vague, "unformulated and unbaptized Christianity," of reasonably correct conduct. It is more negative than positive. There is a gap between it and the churches. It should be made definite and aggressive, and sent on to an earnest and glad completion of itself in an organized Christianity. If we can make this essence, now dimly appreciated, clear and explicit to all and develop it, multitudes, now living hesitating lives, will gladly go on to use it to the utmost, and will ultimately seek the aid of churches in so doing.

In each age and among each people, the right route must be chosen from the prevalent life of the people up to the highest spiritual life. Paul is an example to us in this as in so much else. In addressing the Romans, he uses the legal essence of theology; he takes the respect for law which was fundamental in the Roman mind, the sense of justice, and rises from it to the doctrines of salvation and complete spiritual life. Law and justice exist among us and, indeed, are eternal and inherent everywhere, hence the inspiration of this teaching of Paul is shown in its universal application. But a more intensely practical spirit also exists to-day than ever before. When that essence in religion, which is beyond reason, is laid bare in all its intensity of practical

value, the spirit of this age has a new route up to the highest spiritual life.

In the summer of 1893, M. Paul Bourget, a leading French author, on the occasion of his visit to this country, was interviewed by a reporter of the New York *Herald*. In response to the question, "Are you a Christian?" he answered without the slightest hesitation in the affirmative, and then went on to explain his position thus:—"I have come to recognize that those men and women, who follow the teachings of the church, are, in a great measure, protected from the moral disasters which . . . . almost invariably follow when men and women allow themselves to be guided and swayed by their senses, passions, and weaknesses. For many years I, like most young men in modern cities, was content to drift along in agnosticism, but I was brought to my senses at last, by the growing realization that there is in this life such a thing as responsibility for the influence we have upon others. I saw that the life of a man who simply said 'I don't know and not knowing I do the thing that pleases me,' was not only empty in itself and full of disappointment and suffering, but was a positive influence for evil upon the lives of others —upon women, for instance, and one's friends. Since then my belief has grown firmer each year in the necessity of the Christian system for practical happiness in this world."

In the opinions thus expressed we find a hearty recognition of the practical value of the principles

of Christianity. That a recognition such as this even, is of the highest value to the world, no one can doubt. The novel which M. Bourget first wrote after he had abandoned his "drifting and comfortable belief in agnosticism and had come to recognize the necessity of adopting Christianity," entitled "Le Disciple," is read by Gladstone once a year, who says he can forgive all the other books written by the author for the sake of this one. Let this first acceptance of Christianity become general, and let it be carried on and made to complete itself definitely and aggressively in an organized Christianity, it will open the way to a general social and spiritual transformation of the world. That Christian fiber, that Christlike thought, and that Christlike vision, which are the material out of which a millenial world must be made, will be created everywhere. Given this fiber in abundance, new social measures and routes to reform will gradually appear, which are now invisible. Those which are now apparent, but seemingly impracticable, will become practicable. In proportion as the sum total of Christlikeness in the world increases, all else will come. But above and beyond all, the appreciation of the practical value of religion, loyally lived up to, will develop into a realization of its transcendental saving value.

ARNOLD'S METHOD.

We have said that the teacher who has most effectively combined religious instruction with gen-

eral education, is Thomas Arnold. It was his method to improve every opportunity to give general religious instruction and impressions, to all his pupils without any sectarian bias whatever; and afterward, wherever circumstances made it proper, as when students from Church of England families came to him seeking it, to follow this up with detailed, systematic, denominational instruction. No man perhaps ever had a deeper general religious nature than he, and at the same time few have more firmly believed in the value of specific church organization. He prepared the way for acceptance of, and membership in the latter, by a thorough culture of the former. Though he never seems to have systematized the religious but non-sectarian part of his instruction, he ever made distinctive and powerful use of it, as a preliminary to the other.

One of his pupils says, "Neither generally in ordinary conversation, nor in his walks with his pupils, was his style of speaking directly or mainly religious; but he was ever ready to discuss any religious question; whilst the depth and truth of his nature, and the earnestness of his religious convictions and feelings were bursting forth, so as to make it strongly felt that his life, both outward and inward, was rooted in God." He taught his pupils "to note in any common work that they read such judgments of men and things, and such a tone in speaking of them as are manifestly at variance with the spirit of God." "No direct in-

struction could leave on their minds a livelier image of his disgust at moral evil, than the black cloud of indignation which passed over his face when speaking of the crimes of Napoleon, or of Cæsar, and the dead pause which followed as if the acts had just been committed in his very presence." Yet, with the purpose of making the teaching of the school more unsectarian, he dropped an existing custom of devoting all the lessons in the Passion week to the New Testament.

Whatever dogmatical instruction he gave was conveyed almost entirely in a practical or exegetical shape; "the great proportion of his interpretations were such as most of his pupils, of whatever opinions, eagerly collected and preserved for their own use in after life." While in his general instruction he avoided theological instruction as such, to inquiring souls he freely opened his mind, and used forms and ceremonies and the doctrines of the church. In all his instruction we find this distinction; first, the principles of religion and morality for all, and self-investigation of them by the student; afterward the doctrines of the church, for those who came under his care as a minister of the Church of England. Hence Arnold's method, the most successful ever applied in general public education, was essentially the method advocated here.

JESUS' METHOD.

It was also the method of Jesus, the greatest of

all teachers. He began the Sermon on the Mount with general religious truths:—"Blessed are the poor in spirit: for theirs is the kingdom of heaven." . . . . . "Blessed are they which do hunger and thirst after righteousness: for they shall be filled." . . . . . "Blessed are the pure in heart: for they shall see God." He then proceeds to speak of himself and his own distinctive message. In his discourse to Nicodemus, he gives first a marvelous and unapproachably perfect statement of the general doctrine of the need of a new birth. After he has enforced this truth in masterly style and with overpowering effect, he speaks of himself as the Saviour who can work this profound change in the soul. He gave the woman at the well general religious instruction in the words, "Woman, believe me, the hour cometh, when ye shall neither in this mountain, nor yet at Jerusalem, worship the Father . . . God is a spirit; and they that worship him must worship him in spirit and in truth," before he clearly revealed himself as the Messiah. The same general method is observable in all his teaching. He instituted forms and ceremonies among his disciples, only after thorough preliminary culture of their general religious nature; the Lord's Supper was instituted at the very close of his ministry.

Thus Jesus teaches first, religion, and then, Christianity. He profoundly moves the general religious nature and thence rises to himself and his special doctrines and observances, and to an

expression of their absolute and unapproachable value.

In him and his teaching we have perfectly exemplified what modern education so greatly lacks for its perfection. The new life needed by education begins and ends in Christ. This needed new life is but a fuller measure of the old but ever new life which is in him.

A SYMBOL OF THE NEW LIFE.

The visitor to the city of Boston sees much that is impressive and instructive. He sees the massive and imposing Bunker Hill Monument, pointing upward like the granite finger of New England; it seems to him a symbol of New England character, as the Coliseum is of Roman, and the Parthenon of Greek character. He sees the beautiful gold-covered dome of the State House, floating up over the city, like the benign and radiant sun of New England culture made visible. He sees the Boston Public Library, parent by inspiration of scores and hundreds of other public libraries. But when he visits in South Boston the Institution for the Training of the Blind, he sees something more impressive than all that has preceded. This is the hand of a child, who, like Laura Bridgman, was born deaf, dumb and blind, and in whom the senses of taste and smell are also defective. The child has only one perfect sense, that of touch. He sees the trained hand through which such a child lives and speaks. How wonderful is that hand, giving

and receiving messages, the swiftly moving fingers vibrating almost into invisibility. The coarse nerves have been trained till each finger can talk and hear. One almost imagines that the rosy finger tips can see. The five fingers have been trained to be the five senses. The hand has become an organ auditory, optical, vocal, and spiritual since it is capable of worship and of prayer.

That hand is a symbol of what good education can do, how it can transform the whole nature. It is most impressive of all, since such training, mental, physical, religious, is that which makes Bunker Hill monuments, State House domes, and Boston Public Libraries possible. It is by such hands, and by souls transformed like them, that a new and better world is to be made. The twentieth century must possess such hands and such souls, if it is to take part in that great work, and enter fully into its results.

THE END.

APPENDIX.

CHAPTER I.

1. P. 22. Charles Dudley Warner says (*Harper's Monthly*, April, 1893, p. 800): "one per cent. of the arable land in the cotton States will produce all the cotton the world can use." Five per cent. of the land will certainly do this, and probably Warner's estimate is correct if the most fertile land be chosen and the best possible methods of cultivation employed.

2. P. 23. See address of Captain Noble before Section G. of the British Association for the Advancement of Science, 1890. *Nature*, vol. 42, p. 501.

3. P. 24. See estimate of Berlin Bureau of Statistics, *Nature*, vol. 36, p. 615.

See also Report of the U. S. Commissioner of Education for the year 1889–90, p. xxiii. From the latter it also appears that there was ten times as much steam power in the United States in 1890, as existed in the whole world in 1840.

In this connection, Rankine's "The Steam Engine," p. 429, should be consulted, where it is stated that the actual or efficient horse power of steam engines is from $1\frac{1}{2}$ to 5 times as great as the nominal horse power.

4. P. 24. Prof. C. A. Young says in his book on The Sun, p. 256, "taking the whole surface of the earth, the average energy received from the sun is . . . one horse-power continuously acting, to every thirty square feet of the earth's surface." The areas of New York and Brooklyn together are not less than 66.5 sq. miles, or 42,500 acres. Since there are 43,560 sq. ft. in an acre, sunlight falling on these two cities $= \frac{42\,500 \times 43\,560}{30} =$

61,710,000 horse-power, which exceeds considerably the estimate of the Berlin Bureau and slightly that made at a later date and given by the Commissioner of Education. Since horse-power as actually used in steam engines does not act continuously owing to various causes, there is a large margin of excess in the sunlight falling on these cities, over steam power in actual use in the world.

In regard to the value of the sunlight falling on the State of Pennsylvania, a computation in round numbers, increasing unfavorable numbers and diminishing favorable ones is as follows. Taking the number of men in the state as under two millions, the area as more than 40,000 square miles, the value of a day's labor by one man as one dollar, and the sunlight falling on 70 square miles as equal to the labor of one thousand millions of men, the value of the sunlight falling on the State of Pennsylvania in a week for each man is $\frac{40\,000 \times 1\,000\,000\,000 \times 7}{70 \times 2\,000\,000} = 2{,}000{,}000$ dollars. If this sunlight be used in conjunction with labor saving machinery, its value on a moderate estimate is $6,000,000.

5. P. 25. This estimate, that labor saving machinery increases the power of steam twofold, is no doubt far within the facts. In some departments of work the increase is fifty or one hundred fold. Some estimate machinery as increasing the power of steam twenty fold on the average. But in the comparison between ancient, human and modern mechanical slaves, some allowance should be made for the fact that formerly workers in proportion to their numbers were aided by more animal power, and more wind power as for example in navigation.

6. P. 26. A paper read before the Royal Statistical Society by Mr. R. Giffen, the substance of which is given in *Nature*, vol. 41, p. 211, shows that since the year 1600, wealth has increased in the United Kingdom from £22 per capita, to £270 per capita. For facts in regard to deaths in London poor houses, see Report of Registrar General of Great Britain quoted in the *Arena*, March, 1893, pp. 397–8.

For number of evictions in New York City, see *Arena*, Feb. 1891, p. 375.

For increase in wealth and population of the United States, see U. S. Census for 1880 and 1890.

7. P. 28. See *Harper's Magazine*, vol. 76, pp. 564–5.

8. P. 38. See *Nature*, vol. 47, p. 210.

For other of the facts cited in this connection, see also vol. 42, p. 291, and vol. 41, p. 266.

CHAPTER II.

1. P. 43. See facts presented and inference drawn, on p. 153 of Teaching and History of Mathematics in the United States, by Florian Cajori.

2. P. 46. See "My Class in Geometry" by George Iles, *Pupular Science Monthly*, November, 1890.

3. P. 53. See Edersheim's Life and Times of Jesus the Messiah, vol. 1, p. 231.

For other of the citations in this chapter from the same author, see vol. 1, pp. 41–2, 94, 98, 223, 437, and vol. 2, p. 381.

CHAPTER III.

1. P. 65. For dwarf oaks of Japan, see *Nature*, vol. 41, p. 86; for giant oaks of India, see *Nature*, vol. 43, p. 7.

2. P. 67. See article, Saurians, Encyc. Britt., also *Nature*, vol. 48, p. 302.

For giant earthworms of Australia, see *Nature*, vol. 39, p. 394.

3. P. 70. For this and other of the facts pertaining to natural history used in this chapter, see The Naturalist in La Plata by W. H. Hudson.

CHAPTER V.

1. P. 108. See "Talks with Edison," *Harper's Magazine*, Feb. 1890, vol. 80, p. 434.

2. P. 115. Men and Books, p. 307.

3. P. 118. "An Academic Sketch" in the *University Magazine*, July, 1893, p. 472.

CHAPTER VI.

1. P. 126. Quoted in *Nature*, vol. 47, pp. 280 and 374. In the same place the statement is made that Dr. de la Tourette expresses the same view with Dr. Brinton in the *Journal de Médecine*.

2. P. 133. See *Nature*, vol. 44, p. 458.

3. P. 136. Report of U. S. Commissioner of Education for year 1888–89, pp. 210–11, 606–10.

4. P. 138. *Educational Review*, vol. 3, p. 80.

CHAPTER VII.

1. P. 148. Report U. S. Commissioner of Education for year 1888–89, p. 72.

2. P. 148. *Nature*, vol. 42, 511.

3. P. 149. Report U. S. Commissioner of Education for year 1888–89, pp. 48, 113, 147, and elsewhere.

For Finland, see same, p. 235.

4. P. 151. *Nature*, vol. 44, pp. 451, 469.

5. See Appleton's Annual Encyclopœdia, vol. 11, p. 478, and *Century Magazine*, March, 1893, vol. 45, p. 795.

Emphasis is laid on the fact that a public library should be absolutely free. It is found that even a slight fee immensely cuts down the circulation. As an example of the extraordinary usefulness of entirely free circulating public libraries, see experience of New York City, Appleton's Annual Enclyclopœdia, vol. 11, p. 649.

The Circular of Information, No. 7, 1891, published by the Bureau of Education, states that the number of volumes in Public Libraries in the United States increased 12,000,000, between the years 1886 and 1891. Hence these Libraries now contain more than one volume for every two inhabitants.

6. P. 155. R. G. Moulton, quoted in Report of U. S. Commissioner of Education 1888–89, p. 645.

7. P. 159. See his book on Hereditary Genius.

CHAPTER IX.

1. P. 178. See Compayré's History of Pedagogy, p. 9, also Edersheim's "Life and Times of Jesus the Messiah, vol. i, p. 230.

2. P. 181. *Nature*, vol. 44, pp. 574, 585.

3. P. 189. See Report of U. S. Commissioner of Education for year 1888–9, p. 655.

4. P. 196. *Educational Review*, Feb. 1892, vol. 3, p. 177.

5. P. 199. For the various references to Thomas Arnold, see Life and Correspondence of Thomas Arnold, by Dean Stanley, vol. 1. chapter iii; also vol. 1, pp. 47, 52, 221.

CHAPTER X.

1. P. 210. Plutarch's Morals, Translated from the Greek by several hands. Corrected and Revised by William W. Goodwin, Ph. D., vol. 5, pp. 379–380.

CHAPTER XI.

1. P. 225. Decree of July 18, 1882, art. 5.

See Report of U. S. Commissioner of Education for year 1888–89, p. 458. Numerous other citations in this chapter are from the same source.

2. P. 226. *Century Magazine*, Dec., 1890, vol. 41, p. 275.

3. P. 230. Men and Books, p. 263.

4. P. 233. See *Educational Review*, April, 1892, vol. 3, p. 355.

CHAPTER XII.

1. P. 247. *New England Magazine*, Dec., 1892.

2. P. 249. History of Pedagogy, p. 304.

3. P. 250. See "The Record of Virtue," *Century Magazine*, Dec., 1890, vol. 41, p. 238.

4. P. 260. In the year 1892, over nine million tons of pig iron were produced and used in the United States, (see Bulletin of American Iron and Steel Association, Jan. 18, 1893), that is, more than 18,000,000,000 lbs. If a pound of bread were eaten each day by each inhabitant, the total weight of bread consumed per annum, is less than 24,000-000,000 lbs.

The steam hammer referred to is the one at South Bethlehem, Pa.

5 P. 264. See Herbert Spencer's Education, chapter i, where the author quotes Prof. Huxley.

6. P. 265. See *Educational Review*, Sept., 1892, vol. 4, p. 117.

7. P. 266. See Report of U. S. Commissioner of Education, year 1888–1889, pp. 437–8.

8. P. 266. See Romanism *vs.* The Public School System, by Daniel Dorchester, D.D., p. 162. For proportion of Catholic children in the Parochial schools, see same book, pp. 120–1, where statistics are quoted from Sadlier's Catholic Directory, Ordo and Almanac, year 1888.

9. P. 272. *Harper's Magazine*, April, 1893, vol. 86, p. 709.